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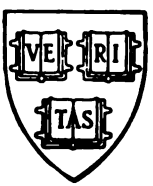

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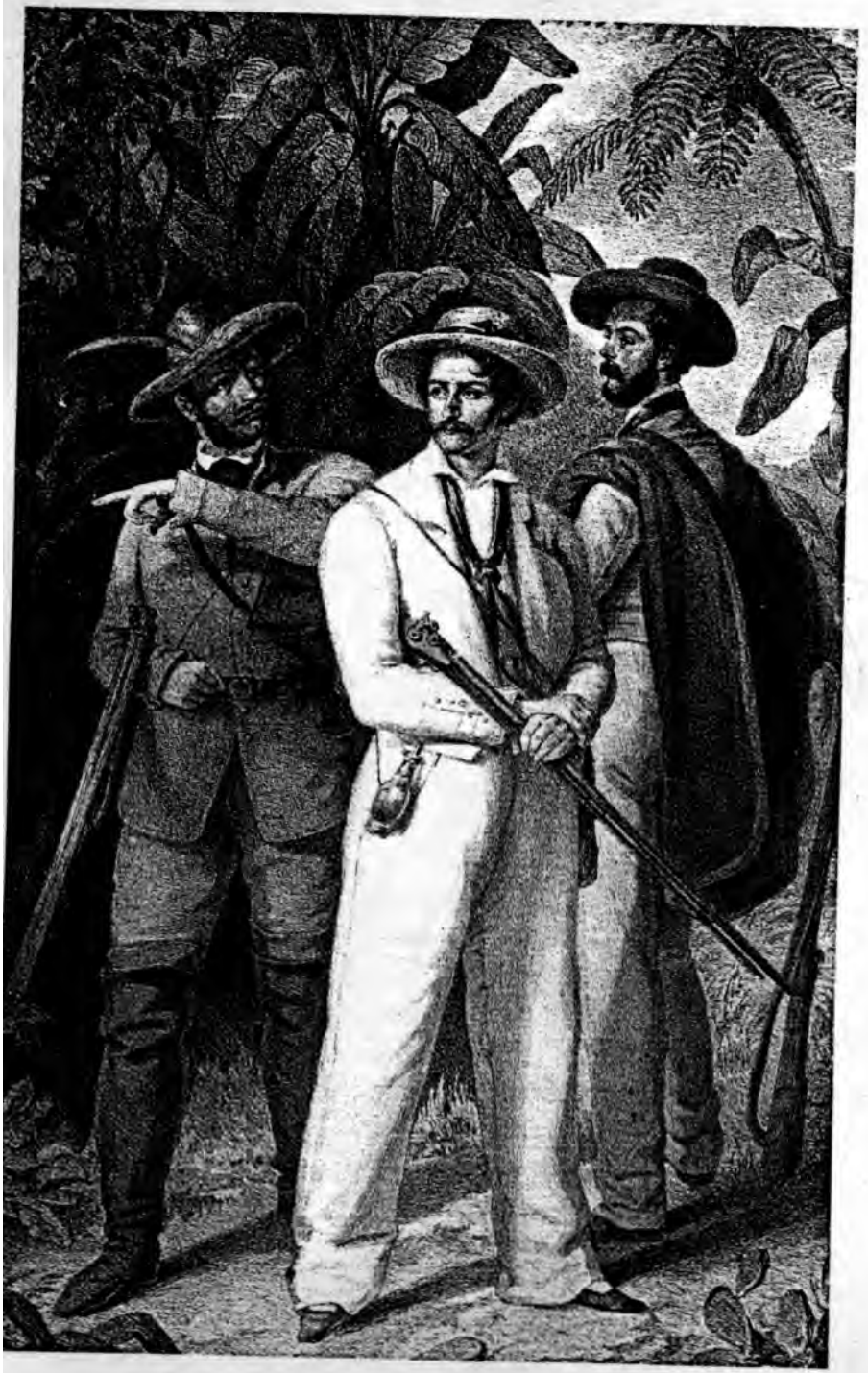

TRAVELS

OF

HIS ROYAL HIGHNESS

PRINCE ADALBERT OF PRUSSIA,

IN

THE SOUTH OF EUROPE AND IN BRAZIL,

WITH A VOYAGE UP THE AMAZON AND THE XINGU.

Translated by

SIR ROBERT H. SCHOMBURGK

AND

JOHN EDWARD TAYLOR.

VOLUME I.

LONDON:
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TO THE READER.

The peculiar circumstances which accompany the appearance of this Work in the English language call for some acknowledgment of the obligation which His Royal Highness Prince Adalbert of Prussia has been pleased to confer upon the Translators. For as this narrative was originally printed in German for private circulation only, we are indebted to the condescension of his Royal Highness, not only for his sanction of our labours, but for the copy of the Work from which this translation has been made.

It is at all times a recreation, which enhances the dignity and usefulness of the most exalted rank, to turn from the duties and agitation of public life into the paths of Science, and to cultivate those pursuits which direct the powers of mankind to the advancement of knowledge in its varied forms. But in the present instance,

and in the present age, this is more peculiarly the case; and the ordinary gratification derived from such sources is increased by considerations of personal interest, and by sentiments of personal respect for the eminent character, station, and attainments of the PRINCE *who has been our guide and companion in these distant travels. We have only to express a hope that the English reader may share these feelings, and peruse these pages with a similar interest.*

THE TRANSLATORS.

London, April 3rd, 1849.

INTRODUCTION

BY

ALEXANDER VON HUMBOLDT.

(*Extract from a Letter to* Sir Robert H. Schomburgk.)

Nearly eight years have now passed, my dear Sir Robert, since I wrote a Preface to the German translation of your interesting "Travels in Guiana and on the Orinoco." Proceeding from east to west through the mountain-group of the Parime, after encountering many perils you arrived at the lonely little village of Esmeralda, one of the last missionary-stations on the Upper Orinoco, which I had succeeded in reaching with my astronomical instruments thirty-nine years before, from the opposite side of the globe. Your labours have materially enlarged our knowledge of the Geography and Natural History of the eastern part of South America, of the mountain-systems, and the great net of rivers between

the sea-coast of Guiana, the Rio Branco, and the basin of the Amazon. If human civilization, which is making such giant strides in North America, should ever penetrate into these fastnesses (a hope which St. Basil calls "day-dreams of man"), the structure of this great net of rivers, from north to south, may open channels of communication such as are unknown in any other part of the world. An insignificant canal, in the vicinity of the Brazilian Villa Bella, connecting the basin of the Guapore (a tributary of the Rio da Madeira) with the basin of the Paraguay, would effect the possibility of an unbroken navigation throughout the whole continent, from Buenos Ayres to the mouth of the Orinoco, opposite the island of Trinidad. These hydrographical contemplations impart a permanent interest to all that relates to any single portion of the world of rivers in South America, a country which at the same time presents the charms of magnificent tropical vegetation, and the aspect of life in its freest and wildest forms.

With these brief considerations I may connect the gratification derived from this interesting Work, which, in conjunction with Mr. Taylor, you have undertaken to translate. It conducts us through Brazil to the mouth of the Amazon River, and through this into one of its important tributaries, the Xingú, the course of which is now explored for the first time. Prince Adalbert of Prussia, whose younger brother shared in

the glorious deeds of the British army during the last war in India, had previously visited the Crimea, Constantinople, and Greece. A youthful passion for the sea early awakened in him; and a noble thirst for knowledge, the desire to enrich life by the acquisition of new and enlarged ideas, subsequently led him to travel through Sicily, along the Spanish coast, to Teneriffe, and Rio de Janeiro. The Journal of his Travels, printed originally only for the perusal of his friends, and enriched with sketches made from nature by the Author himself, is not in the strict sense of the word a scientific book; nevertheless it contains observations and views of nature and customs which reflect a vivid picture of the scenes which the Prince witnessed and passed through. Instruction is imparted in the most pleasing manner, when an unaffected simplicity and an absence of all pretension pervade a work like this.

Sans Souci, October, 1848.

PREFACE.

It will be in the recollection of all who receive this Work from my hand*, that a few years ago I undertook a voyage to Brazil. The chief motive that prompted me was a wish to make a long sea-voyage,—one of my favourite desires from childhood; whilst my imagination, attracted by the wonders of the tropical world, gave a purpose and direction to this ambition. His Majesty was pleased most graciously to enter into my views, and grant me permission to accompany my Father on his tour through Italy, and afterwards to prosecute my travels across the Atlantic to Rio de Janeiro. The remembrance of this period will be cherished by me through life, and, in addition to so many other favours, will ensure lasting gratitude toward my Sovereign.

[* This Work was only designed and printed for private distribution among the Prince's immediate friends.]

On my return from a voyage in the Neapolitan steamer 'Palermo' round Sicily and to Malta, in the course of which I ascended Ætna, accompanied by my Brother Waldemar, I took leave at Naples of my Father and Brother, and, joined by my two faithful travelling companions, Captain (now Staff-Major) Count Oriolla, and Second Lieutenant (now First Lieutenant in the Dragoon Guards) Count Bismark, on board the 'Francesco I.,' went to Genoa, to offer my thanks in person to his Majesty the King of Sardinia, for his gracious and most welcome offer of a frigate to convey me to Brazil and back to Europe.

On the 22nd of June, 1842, the 'San Michele' of sixty guns, under the command of Captain d'Arcollière, weighed anchor, and steering through the Gulf of Lyons in sight of the Maritime Alps and Corsica, sailed past the distant Monserrat, and close under the rugged rocks of Formentera; then passing the Cape de Gata she entered the bay of Malaga, from whence we made an excursion to Granada. The frigate afterwards sailed to Gibraltar and Cadiz, thence by the Ilhas Desertas to Madeira; and after touching at Teneriffe, passed close to the Cape Verd Isles, and arrived early in September, 1842, at Rio. The further course of these travels will be found in the following pages.

In that portion of the Work which relates to Rio de Janeiro a brief sketch is given of the history of Brazil, and a cursory geographico-historical review is also prefixed to the last portion: the Reader must not however seek either scientific investigation, learned disquisitions, or a narrative of perilous exploits and adventures in these pages, which contain simply an unadorned journal of travels, undertaken from motives of pleasure and recreation in countries far distant from our own. Let the Reader glance over the contents of this Work, and if he find in them any matter not wholly without interest, my gratification will be great.

W. ADALBERT,
PRINCE OF PRUSSIA.

Palace of Monbijou,
October 20th, 1847.

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MOUNT ÆTNA.

MAY 7th, 1842.—Cape Molino, at the end of the long, rounded mountain of Aci Reale, whose true English verdure is agreeably diversified by numerous small, white villages, already lay behind us. The Cyclops Isles rose boldly out of the sea, close to the promontory,—grotesque, isolated rocks.* Behind the green mountain of Aci were gathered heavy clouds, beneath which was seen the dark-blue foot of Ætna, looking like the truncated base of a gigantic, gently-ascending cone. On a sudden the dark clouds parted, at one small spot, and the outline of the upper portion of the mountain appeared through the opening: this was the summit of Monte Gibello. I should have looked for it at a greater height, but the

* These basaltic rocks are the only ones in Sicily in which Baron von Waltershausen, after a careful examination of the island, has observed a columnar formation.

termination of the truncated lower cone was plainly seen through the break in the clouds. At this point rises the small, black, sharply defined upper cone, with an imperceptible depression between the two scarcely visible summits, which indicate the upper margin of the crater. From time to time other portions of the outline of Ætna were disclosed to view, still covered with snow: on the warm surface of the highest cone alone the snow never lies. Ere long the clouds again closed, and veiled the summit of the mountain.

Scarcely had we passed the Cyclops Isles, when the view extended over the shores of the level sweep of the Gulf of Catania. The base of Ætna slopes gradually down to a wide plain, which stretches to the sea, and terminates in the sandy, yellow-coloured Cape Croce. At the edge of this plain, and close to the coast, rose the domes of Catania. Two black streams of lava, overgrown with cactuses, enclose the city, like walls, washed by the sea.

It was four o'clock in the afternoon when we cast anchor in the roadstead of Catania. Baron von Waltershausen, who has resided here for many years and made Ætna his study, came on board, accompanied by Privy-councillor Otto from Breslau. The younger members of the party pressed around, to learn from his own lips whether, as we had been told, the shortness of the time and the snow would present any insurmountable obstacles to our long-desired ascent of the mountain. To our great joy, Von Waltershausen saw no difficulty in the way, especially as only a fortnight before a French

lady had, notwithstanding the early season, ascended with her husband to the summit: indeed he offered himself to accompany us. The boat of the 'Palermo' shot quickly over the short distance that separated us from shore; and sailing round the Mole, now in the course of construction, on which is a high bricked battery mounting a few guns and with a telegraph, not unlike a square tower, we wound our way among the cables of the only two brigs lying in the harbour, and soon landed.

Our hotel was in one of the principal streets, running parallel to the harbour, and near the waterside. All the preparations for the expedition were quickly made, and at six o'clock we set out merrily in two carriages.

The little party consisted, beside my brother and myself, of the Counts Oriolla and Bismark, Baron von Waltershausen, and Lieutenant von Daum, of the fourteenth regiment of infantry. Catania, although neither a beautiful spot nor a spacious harbour, has yet quite the air of a large city. Our way led us through a long street, in parts shut in by high houses, called the Strada Ætnea, the mountain forming its point of view. Our attention was excited by the slight iron bridges crossing the middle of the streets, which intersect one another at certain points; these are rendered necessary by the frequent and violent inundations of the mountain-streams, that occasionally rush through the streets into the sea. Notwithstanding the channels, the middle of the pavement is worn by the force of these currents. The dress of the women in Catania, with their long, black shawls

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these was the stream of 1329, which flowed into the sea near Aci Reale; the second, that of 1381, over which our way led us to Nicolosi, passing it just beyond Catania. The quantity of tall cactuses growing on this stream is very striking; these are planted artificially, to make the lava fertile: upon the more recent streams, which we had to cross, we also found much cultivation, and on one spot the barley was just being harvested. It is remarkable, that the age of the lava cannot here be distinguished by the amount of culture,—a circumstance which is perhaps attributable to the fact, that the inhabitants never follow any regular system of tillage: moreover the old and recent lavas are frequently undistinguishable. Baron von Waltershausen for instance lately discovered, in a stream which appeared to him quite recent, a Roman aqueduct, constructed of lava, the date of which must be above a hundred years before Christ. The lava-stream of 1329 is visible from the sea, and forms a lofty black wall along the coast, upon which stands an old tower. The third current, which flowed into the sea at a more recent period, is that of 1669; its two tributary streams did not however reach the sea. The lava issued from the principal eruption-cone on the side of Ætna, that of Monte Rosso, which is nearly as high as the Brocken. This mountain is properly called Monti Rossi, for it consists of two cones connected at the base. My father saw in these a resemblance to the Falkensteins at Fishbach, especially from the Hirschberg side, where

the summits of the Falkenberg hills are more rounded; except that from a distance no rocks are visible on the Monti Rossi.

These conical hills, standing out against the base of Ætna, are from a distance distinguished by either a dark or red-brown colouring. Viewed from the sea, they look like molehills at the foot of Monte Gibello, and may serve as a measure of the height of that mountain, which is commonly underrated by the eye. The road toward Nicolosi passes, without touching it, the side of the stream of 1669. This is the torrent which destroyed Catania in so fearful a manner, encompassing the city, as we had already observed from the sea, on two, nay indeed on three sides.

It was night, the clouds had dispersed, and the stars shone forth with a southern brilliancy; a single cloud rested upon Mount Ætna, but not so dark and heavy as in the daytime. "The only moment," said Von Waltershausen, "when the summit is generally seen free from cloud is sunrise; but we can scarcely reckon upon this view, as the clouds have for several days been motionless; it is however possible to reach the top of the mountain by day-break, and we shall then have a fine and clear view down."

The Baron thus began to encourage the hope, which he had at first persisted in denying us. Our looks were turned anxiously toward the grand mountain that rose before us. On the left was Monte Rosso, which kept increasing as we ascended. The moon did not come forth, but to our great joy a beautiful zodiacal

light appeared in the western sky,—a faint white gleam, which extended in a conical form toward the zenith, and is more visible here than in northern latitudes. Shortly before we observed this light, Von Waltershausen directed our attention to a wall of rock on the right of our path. This was the well-known tufa-stratum of Fasano, which seems to have arisen from the plain: its stratification and the leaves and plants found upon it indicate its marine origin. We passed successively, at various intervals, Gravina, Massa Lucia, and Massa Annunciata. The number of towns and villages around the base of Ætna, as well as the size and density of the population, is remarkable: 200,000 inhabitants dwell at the foot of the mountain, giving an average of 10,000 to the German square mile.

It was nine o'clock when we reached Nicolosi, the last village below Ætna, 2100 feet above the sea. We betook ourselves to the inn, whilst, with great trouble, guides and mule-drivers were procured, and the beasts saddled. Nearly the whole village was already asleep, and the folks had to be called up; nor was it an easy matter to rouse the mules and horses required for ourselves and the guides.

At length, at a quarter to eleven o'clock all were ready,—six beasts for ourselves, and three for the guides. We mounted as well as we could in the dark, one groping for the stirrup to the pad which served as a saddle,—another for the rope with which he had to manage his steed. Meanwhile the mules proceeded to arrange themselves as usual in file, without paying the

slightest regard to the movements of their masters. Many a nag seemed at first ready to stumble over his own feet, which afterwards won laurels upon much rougher paths. Our guides, as well as some of the party, had donned the thick, hooded cloaks of the country; and my brown Syriote served me, during our night ride, as a capital protection against the cold.

With two guides, well muffled up, in front, and one in the rear, our party set off at a brisk pace: a fourth guide with a lanthorn and a lad went at our side. Before us rose Ætna, and to our great joy its snowy summit was cloudless. Although elated with hope, we could not help envying a party, of two ladies and their guides, who had preceded us up the mountain. We could no longer reckon upon reaching the summit by sunrise, nevertheless the whole party were in high spirits.

After traversing a gently ascending plain, almost barren of trees, and covered with the white volcanic sand of the Monte Rosso, into which the footsteps of our beasts sunk at every step, we at length reached the lava-stream of 1537, which crosses the plain. The horses and mules picked their way on the tops of the sharp stones, and showed how used they were to these rough paths. In a short time we again followed the road over the volcanic sand. Time passed quickly in the most agreeable conversation, which naturally turned upon the subject of the volcano, rising before us in the silence of a bright starlight night, as we rode over the traces of its former devastations. A few years ago, and how different a picture did it present to this peaceful stillness! Baron

von Waltershausen had many tales to tell of eruptions which he had himself witnessed.

We gave the reins to our sure-footed animals, and listened with eager attention to the words of the "Barone," as the people here call Von Waltershausen: they regard him as a kind of mountain-spirit, well conversant, as a matter of course, with remedies for all the ills that flesh is heir to. His perseverance and intrepidity have given him an extraordinary reputation among these mountaineers, and every one knows him. Whenever they come to consult him,—and his office is naturally a very troublesome one,—he enters into their superstitious ideas, and, accompanying his advice with a sort of hocus-pocus, he gives them one or more numbers, which play a great part in their notions of fate, and they depart content. He of course generalizes as much as possible, in true oracle fashion; so that, if his prophecies fail, his credit at least does not suffer. It made us shudder to hear Von Waltershausen tell of the nights he had passed on the edge of the crater,—at times obliged to lie flat on the trembling and heaving ground, to prevent his being swept by the drifting storm of hail and snow into the bottomless, steaming and glowing abyss; while at other times he had ventured to descend into the roaring gulf of the crater itself. The whole time that the volcano of Ætna was in eruption, he never quitted his dwelling on the mountain, and at night he was almost constantly on foot, in order to be near the interesting but awful spectacle.

During the last eruption, in 1838, he was one evening

returning from a long excursion around the mountain, to his cottage, the Casa del Bosco or de la Neve, when two Englishmen met him, who expressed an urgent desire to reach the crater, which was in action, but whose guides could not be persuaded to proceed further. The "Barone" offered himself to conduct them, but the Sicilians turned back. The three intrepid Northmen, not content with having reached the summit of the volcano, descended into the crater. The lava-stream, which issued from the newly formed crater, poured down into the old fathomless abyss, and filled it to within a few hundred feet. With a frightful crash one of the colossal walls of this old crater all at once fell in, and the glowing, steaming, and sputtering lava flowed unimpeded down the cone. The exhausted travellers sank down on a projection of rock in the old crater, a few feet above the glowing stream, and, in spite of the noise and tumult of the mountain, fell fast asleep from sheer exhaustion. On awaking after awhile invigorated, they climbed up the steep edge of their frightful bed.

It is remarkable how suddenly Ætna often passes from a peaceful state into one of terrific convulsion: probably the sea-water may enter into the heated mountain through clefts, or in some other secret way: white steam rises, just as in the boiler of a steam-engine, which either forces out the stopper that closes the great opening or gulf of Ætna, the upper crater, or tears open the side of the mountain, when a series of small eruption-cones frequently spring out of the chasm. The Baron has counted two hundred and seventy such cones in the cir-

cuit of Monte Gibello: he argues that the vapours which produce these phenomena are merely steam, from the fact that he is always able to breathe in them, whereas a descent into the crater during an eruption would otherwise be impossible.

On a sudden we saw before us the outline of an eminence standing out darkly against the clear blue sky, with a tree upon it. "We are now at the commencement of the forest region," said the Baron. Our beasts, proceeding at a quick pace, had scarcely mounted this height, when we found ourselves in the midst of oaks, growing upon the old lava. We climbed up the ascent on the sharp pointed masses of lava of 1766: small, black eruption-cones stood out in relief against the sky. The conversation was resumed, and our interesting guide went on to tell us, how, when the mountain is in action, the white vapour first casts aloft into the air black and red volcanic sand, and afterwards ejects red-hot stones, accompanied by a roar like thunder. Actual flames are never observed; the masses of red-hot stones, large and small, have that appearance from below, but never when seen near. The largest projected mass of rock which Von Waltershausen himself measured, was five metres (about eighteen feet) long, and had been thrown to a distance of three thousand feet from the crater. He has observed, by his seconds-watch, stones thrown up from Ætna, fall from a height of three thousand feet, and estimates that some may perhaps have been projected as much as ten thousand feet into the air. The eruption concludes with the pouring forth of the steaming currents

of lava. A remarkable effect is said to be produced by the thick clouds of vapour, which issuing from the crater roll at times one over another like enormous casks. One day the Baron observed a small ring, rising from the abyss of the volcano, which at the height of two thousand feet attained a gigantic size,—a spectacle frequently exhibited on a small scale by the rings of smoke which rise circling from the cannon's mouth. The noise of Ætna also may be compared to the roar of artillery, and, in the opinion of the Baron, all the cannon of Lützen and Leipzig could not possibly have equalled the thunder of this volcano. The stones almost always fall perpendicularly into the crater; once only, just as Von Waltershausen had placed his barometer on the edge of it, the wind suddenly shifted round, and carried the shower of stones toward him: he and the guides threw themselves hastily under an overhanging rock, but the instrument was dashed to pieces.

On reaching the Casa del Bosco, we were astonished to find that it was already half-past one o'clock.

May 8th.—We dismounted, to rest our animals for a quarter of an hour, and entered the cottage, which the adventurous explorer of Ætna built for himself, and in which he once lived forty days successively. It is now empty; every traveller has the benefit of its shelter, although in truth it looks more like a stable than a house. We stirred up the live ashes which the ladies had left in the hut, and seated ourselves around the little glimmering fire. Had it not been for the cold, we might have imagined ourselves in the East, surrounded by figures

wrapped in brown cloaks, and with hoods drawn over their heads. As we stood before the door of the Casa del Bosco, 4800 feet above the sea, the stars glittered with a brilliancy which I had never before seen; and what a contrast between the blue of that clear heaven, and the dark firmament by night in our northern regions!

Immediately behind the cottage, the path was steeper and more stony; we here left the forest region, and entered the "regione deserta." The huge, black dome of Monte Castellazzo, six thousand feet high, rose on our left. Our path up the mountain pursued a steep zig-zag course in the lava. The animals stepped cautiously, lengthening the turns in the path as much as possible, and wheeling round with all four feet upon one spot. It is a pleasure to me to ride a sagacious animal, which finds the way for itself, like the mules in the Swiss Alps, the Turkoman and Arab horses in the slippery and uneven streets of Constantinople, or that pretty race of poneys to whose sagacity the rider trusts himself in the rough mountain-paths of the Crimea. I have always maintained, that our method of training horses, which converts them into mere passive brutes, is by no means advantageous in all cases to the rider, as it compels him to have his thoughts continually fixed upon his animal.

We regretted that the darkness prevented our distinguishing the lavas accurately, but we were aware twice of passing places which appeared to be the dried-up beds of rivulets. It was not until our descent that we could examine these spots of smooth lava closely. The light of

obtuse angle corresponding to that of the inclination of Ætna on this side as seen from the sea, or in a reversed direction. The portion of the sky near the horizon was tinged with a rosy hue by the reflection of the dawn, whilst higher up all was blue. The oblique line on the sky, the shadowed outline of the mountain, formed the limits of a darker tone of deeper shade, of two colours standing one above the other, which, commencing here, extended indefinitely on the right. We turned our eyes from this wondrous spectacle toward the rising sun. At our feet, beyond the dark, sharply defined edges of the Val del Bove, lay the Gulf of Catania, with the black lava-streams, the lofty domes, the ships, and the 'Palermo' anchored in the roadstead, scarcely visible by the naked eye. The flat, sandy coast in the direction of Syracuse, with the Lake of Lentini and the Simeto, extended to the Gulf of Catania; even the most southern headland of Sicily, one of the terminal points of Europe, lay before us as distinctly as on the map. From the strand beneath us stretched the deep blue sea, and almost on a level with the eye extended the coast of Calabria, a clear, blue mountain-chain, whilst above it gleamed the bay of Tarentum like a streak of silver. Small, single clouds were skimming over the sea, and flinging their shadows upon its waters. One moment Baron von Waltershausen imagined he could even descry Malta, but with the telescope we found that the object was a small white cloud. He distinctly remembered having once seen that island, but the notion that the African coast is visible from Ætna is fabulous. It was five o'clock when the sun rose.

we rested for awhile, upon a small black heap of sharp fragments of lava, until all our party were collected. Lieutenant von Daum was obliged to creep on all fours, for want of a pole, till the guide furnished him with one. Immediately after we came to a second acclivity, on the top of which, like a black point, stood the Pietra del Castello, an old Roman wall. On climbing up this slope, we saw before us, on our right, the dark summits of Monte Agnolo, 7500 feet in height. We now entered on the Piano del Lago, a plain of snow, inclined at an angle of from 7° to 11°, and glad enough we were to reach at length an easier ascent. This plain however seemed interminable; far away beneath us stretched the wide field of snow, and overhead the sky grew every moment brighter, whilst the stars gradually disappeared. As we advanced, the black points at the end of the Piano del Lago seemed to recede before us. At length we reached the edge of the snow plain, which is bounded by the Val del Bove.

The sun's gleaming orb rose slowly out of the sea, and cast its first rays upon Ætna. On turning round, we saw the shadows of the mountain on the vault of heaven —never had we witnessed such a spectacle! It was unfortunate that we were not at this moment upon the summit of Ætna, where we should have been able to see the shadow of its whole outline; we had only reached the edge of the Val del Bove, a height of 7800 feet, and therefore saw merely the shadow of the acclivity upon which we were standing. An oblique line was distinctly marked on the sky, descending from right to left, at an

the stars seemed to us still more brilliant than at the Casa. The zig-zag path grew more and more steep; those of our party who rode along the upper turns of it, looked down upon the heads of their companions beneath, and the conversation, although less lively, was still carried on in a vertical direction with considerable spirit.

We had now to cross some small patches of snow, at an elevation of 5500 feet, the surface of which was frozen hard, and so glassy that the animals slipped continually. Our lanthorn blinded, rather than assisted us in finding a path over the black lava, which stood out from the snow in single ridges. At the height of six thousand feet the snow increased so much, that we could ride no further, and were obliged to dismount. Not without a feeling of silent regret, we were now doomed to see the warm ingredients of our breakfast, the bouillon and coffee, left behind in company with the animals,—left moreover in charge of our rough guide and his lad, who, it was natural to suspect, might readily enough be tempted to appropriate these treasures: we had not yet forgotten our hard fate at Nicolosi, where, on setting about packing the baskets for the mules, it was discovered that several of the bottles had already been emptied: some of our party innocently fancied that the corks had started, and the wine run out! Thus were we left, with only the cold portion of our breakfast to accompany us on our cold expedition.

At half-past two we began our march on foot, and ascended a steep, smooth acclivity of snow: on the top

Reaumur's thermometer stood at only $1\frac{1}{2}°$ below the freezing point. At noon on the seventh of May the temperature in Catania had been 16° R.

The last cone of Ætna now rose distinctly before us, and we could even distinguish the two ladies, who had proceeded about half-way up. The ascent began to be more fatiguing to me, and we often halted for a minute, seating ourselves on the blocks of lava which peeped out from the snow. Among these scattered fragments, and scarcely rising above them, stands some Roman brick-work, to which the names of Philosopher's Tower (Torre del Filosofo), Altar of Jupiter, or Altar of Proserpina, have been given. With difficulty we at length reached the snowed-up Casa Inglese, situated at an elevation of nine thousand feet; and after crossing the lava edge of the old crater of Pianta del Lago, a scarcely perceptible hillock, we rested for awhile in a hollow basin of the still smoking current of 1838, sheltered from the north wind.

Seated on the warm bed of lava we were enjoying our breakfast, when on a sudden we observed some white clouds, rising from the valley on the south of the mountain, and were obliged to hasten on our way, in order to reach the summit before them. The last black cone, rising 1200 feet above the Casa Inglese, stood out in strong relief against the deep blue sky; its ascent is about as difficult as that of Vesuvius. To avoid continually going upon the loose fragments of lava, where every step must be set with caution, or upon the ashes, in which your foot perpetually slips back, we kept for the most part along the narrow strips of snow that fill

obtuse angle corresponding to that of the inclination of Ætna on this side as seen from the sea, or in a reversed direction. The portion of the sky near the horizon was tinged with a rosy hue by the reflection of the dawn, whilst higher up all was blue. The oblique line on the sky, the shadowed outline of the mountain, formed the limits of a darker tone of deeper shade, of two colours standing one above the other, which, commencing here, extended indefinitely on the right. We turned our eyes from this wondrous spectacle toward the rising sun. At our feet, beyond the dark, sharply defined edges of the Val del Bove, lay the Gulf of Catania, with the black lava-streams, the lofty domes, the ships, and the 'Palermo' anchored in the roadstead, scarcely visible by the naked eye. The flat, sandy coast in the direction of Syracuse, with the Lake of Lentini and the Simeto, extended to the Gulf of Catania; even the most southern headland of Sicily, one of the terminal points of Europe, lay before us as distinctly as on the map. From the strand beneath us stretched the deep blue sea, and almost on a level with the eye extended the coast of Calabria, a clear, blue mountain-chain, whilst above it gleamed the bay of Tarentum like a streak of silver. Small, single clouds were skimming over the sea, and flinging their shadows upon its waters. One moment Baron von Waltershausen imagined he could even descry Malta, but with the telescope we found that the object was a small white cloud. He distinctly remembered having once seen that island, but the notion that the African coast is visible from Ætna is fabulous. It was five o'clock when the sun rose.

pointed summit of Ætna, called the "Dente." Here we looked perpendicularly down into the crater of 1832, about three hundred feet deep: the one on which we had first stood, and which is the smaller of the two, was that of the latest eruption, in 1838: they are separated by a wall of partition. The overhanging summit on which we were standing rises 10,130 feet above the sea; the other, on the western or southern side, attains an elevation of 10,175 feet. The Emperor Hadrian, the great traveller, and the philosopher Empedocles, are said to have been the first who ascended Ætna: the philosopher afterwards threw himself into the crater, because he was unable to explore the wonders of the mountain.

Smoke was rising from the crater, though not in any great quantity, during the whole time we stood there; and the north wind, driving it toward the highest points, prevented our ascending to them: the smell was like that from a mine. The stones around the crater were coloured yellow by the sublimation of sulphuric-acid salts; similar yellow spots are also seen in the crater, which has for the most part a very light grey, almost a whitish grey, colour. Assembled here, at a height of ten thousand feet, we raised a "Vivat!" to our beloved King, and the shout resounded far into the clear air. Von Waltershausen, albeit a Hanoverian, proposed the sentiment,—"To the august Patron of German art and science!" in which we Prussians joined with a feeling of pride and exultation. Never perhaps was there a more hearty cheer given for our beloved Monarch since we have enjoyed his paternal government.

How august, how grand was Nature all around—how rich in memories of ancient times! In the waters at our feet Ulysses once cruised, and navigated the straits between Scylla and Charybdis, which we saw in the far distance, as if drawing close together. The ancient Taormina, the black rocks of the Cyclops, the old inhabitants of this fire-abyss, Catania and the harbour of Syracuse, where Archimedes burned the Roman fleet, all lay spread out before us; in fact, the view extended over the whole eastern, and part of the southern, side of the triangular island. Unfortunately an interminable sea of white, fleecy clouds stretched high above the land toward the north-west, casting dark shadows upon the depth below us. But the objects immediately around us well deserved attention. Von Waltershausen showed us on three separate spots the outline of the elliptical crater of elevation. Toward the north it formed a wall of snow, with a black stone upon its top; then came the point, where the wall is cleft, and the Val del Bove, 5500 feet deep, with black, perpendicular sides, begins, laying bare the interior of the volcano, and widening gradually to such an extent that the Brocken, if dropped into it, would entirely disappear. Lastly he showed us the small ridge of lava at the Casa Inglese, near the spot on which we breakfasted, where the edge of the crater of elevation separates on the south from the Piano del Lago. In this old amphitheatre of Ætna was the crater, which the "Barone" recollected as being formerly the principal one of the volcano, and out of which those of 1832 and 1838 arose. At that time it could be sounded perpendicularly to a depth of about

two thousand feet, although it is said to have been in reality unfathomable. My uncle, the Landgrave Philip of Hesse-Homburg, had seen this old crater in all its grandeur. Von Waltershausen showed us the spot where the lava of 1838 overthrew the partition-wall, inundated, and in part filled up, the old crater; and he also pointed out the projecting rock over the now hardened lava where he fell asleep in that fearful night.

It was half-past seven o'clock when we reached the summit, and after barely half-an-hour's rest we started on our return; the heat was oppressive. We descended the cone quickly, and not without fatigue, to the plain of snow, passing close to the Casa Inglese: the weariness in our limbs gradually wore off. On a sudden a fog arose, which rendered it difficult for us to keep together. We went part of the way down the snow declivity at a running pace, which obliged us to keep our bodies bent back. In this manner we soon left the snow behind us, and now traversed the two slippery streams of lava, resembling rivulets, above the edge of the forest region. They have one peculiarity,—the appearance of a stream arrested and stiffened in its course, without crack or cleft, and smoothed by the mountain waters. All other lavas appear like a river at the breaking up of the ice, when mass impels mass, so that only inclined or horizontal, sharp-pointed flat blocks rise up.

From ten to eleven o'clock we breakfasted and took a nap in the Casa del Bosco, and then started on our ride to Nicolosi. The cultivation of the forest-region is very small, and is said to have decreased considerably; here and there only stands a solitary tree. The stream of

1766 is remarkable from the tall, scaly forms of its lava, just before the traveller quits this region. The plain extending to Nicolosi, at the foot of the Monti Rossi, is covered with black volcanic sand, which produces a strange and gloomy effect. At one o'clock we reached this place, and at four we drove into Catania, following the carriage of the English ladies, and escorted by a gendarme who was a little the worse for drink. At seven o'clock the next morning the two ladies were up and stirring,—no trifle after such a laborious ascent! We had made the acquaintance of their two predecessors, the Mesdames la Motte, on the passage from Malta to Trapani. The younger lady alone climbed to the summit; the other did not reach the crater, as they themselves told me when we were entering the Bay of Naples.

In summer the ascent of Ætna is an excursion for ladies,—but in summer only, when the tourist can ride as far as the Casa Inglese. All honour then to these ladies, who accomplished the feat in spite of the snow, and exhibited a striking instance of courage and perseverance.

May 9th.—This was a warm, bright and cloudless day. In crossing the Strada Ætnea the mountain rose perfectly clear to view at the end of the street; its colour was a misty dark blue, against which the snow of the upper part stood out in strong contrast, whilst merely single narrow strips continued a little lower down. Rather more than the upper third was covered with snow. We could distinctly perceive the two highest summits, rising from the black cone which peeped out of the snow; the sharper but somewhat lower summit,

on the right, was the one which we had ascended. No smoke was to be seen from below, but this was natural, from the height of the mountain.

The view of Ætna from the garden of the Benedictine convent of St. Nicolo is wonderfully fine: this spot is an oasis of cypresses, shady trees, and the most splendid hedges of rose-trees, situated in the midst of the black lava of 1669. When the stream which destroyed Catania (says the legend) approached this convent, all the monks quitted it in haste, except one. This monk seized the nail of the cross of Christ which was preserved here, and held out the relic toward the stream, whereupon the glowing lava flowed round the building, without doing it any injury. We were conducted into the enormous church, which testifies to the well-known wealth of the convent. Here sat in long rows nearly all the party who had previously met on board the steamer, listening to the tones of the famous organ. The Prior showed my brother and myself his collection of minerals: it is particularly rich in sulphate of strontian and crystals of augite, as well as the lavas of Ætna.

At twelve o'clock our 'Palermo' weighed anchor: on raising the anchor *à pic*, we approached the lava, which descends steeply into the sea, like a black, low rock. Ætna looked indescribably beautiful from the roadstead, with Catania at its foot. The further we receded from the mountain, the higher and more blue it became, until by degrees the houses, trees and hills at its base entirely disappeared, and it seemed to rise directly out of the sea, without any intervening foreland.

THE ALHAMBRA.

JULY 3rd.—The Andalusian sun shone warm and bright into my cabin: I awoke, cast a look through the window, on the mighty Sierra Tejeda, which stretched into the clouds near us on our right, and then went on deck. The high mountainous coast extended far in the distance, with its numerous rounded domes rising above and behind one another; single white houses were scattered up the heights, and villages skirted the seashore. Straight before us we could descry Malaga, which we were gradually approaching, with its tall Moorish fortress of Gibralfaro, situated upon a steep hill on the right, and the square tower of the Alcazaba on the acclivity which connects the city with Gibralfaro.

There was little wind, and the frigate made her way slowly. The lofty Sierra disappeared behind the eastern points of the wide, sweeping bay upon which Malaga stands. Above the city rises majestically the lofty cathe-

dral,—a giant among the surrounding buildings, like St. Peter's at Rome. On the coast we noticed single towers, which in ancient times served as a protection against the incursions of the Moors.

Our crew had dressed themselves in white. Captain d'Arcollière now seized the speaking-trumpet, and the officers were all quickly at their posts. The sails were furled, and the anchor was let go in nineteen to twenty fathoms, at about two miles from the shore. At first the spanker had to bring us round; then the fore-top-sail was again set, and thrown aback, to stay us in our course, so as not to overshoot the anchor. It was Sunday, and Mass was said in the battery, soon after which the Prussian Consul, Mr. Rose, came on board, and I immediately landed with him.

The situation of Malaga is very beautiful. The western cape of the bay, Torre de los Molinos, much resembles Cape Zaffarano, as seen from Palermo. A plain similar to the Bagaria parts it from the mountain-chains of the main-land. Its form is beautiful and massy. The east wind covered it with a light veil of mist, but thicker than on the other parts of the coast. The aspect of the city has a yellowish tone, similar to that of Palermo. The mountains are of a brownish, burnt colour, like the rock of Malta glowing in the sun and the naked mountains of Greece. Toward the eastern points rise two conical hills, united at their base, "Les Tetons de Malaga," which serve as landmarks. Houses, trees, and plantations of cactuses extend right and left of the city, while stemless vines creep up the heights in all directions, just as

in Greece, with here and there cactus-plantations on the hill-sides. But this scanty verdure failed to impart variety to the general tone of brownish yellow colouring. The harbour of Malaga is cut obliquely into the line of coast, about S.W. and N.E., so that it seems from a distance as if the Mole which protects it against the sea ran parallel to the coast. At the end of the Mole stands the white lighthouse, in the little battery of San Nicolo, whilst in the middle of the Muelle Viejo a similar fort, called the Castillo de San Felipe, is marked by two small white houses. The west side of the harbour is also defended by two batteries, placed on small, rounded, mole-like projections—*embarcadères*.

It being Sunday, the batteries had hoisted the yellow, red-striped Spanish flag, and all the ships in the harbour were drest out. There was no man-of-war amongst them, the French sixteen-gun brig L'Argos, an old acquaintance from the Gulf of Salamis, having just sailed when we entered the roadstead.

The Consul's boat landed me near the Casa del Sanidad, whence I immediately proceeded to the cathedral. Everything here reminded me of Sicily, even the dress of the women. The men, of all conditions, sailors included, wear light stuff jackets of a bright or dark colour, a red band round the body, and a curious low hat with two black silk tufts at the side. No Spaniard goes without moustachios. The houses much resemble those of Malta, especially in the peculiar kind of balcony: the windows are generally trellised.

The interior of the cathedral produces a grand im-

pression: it is built in the style of the period of the revival of art, and its ceiling is ornamented with curious Moorish arabesques. The choir, celebrated for its carved work, stands in the centre of the church. Of the pictures, two Madonnas by Cano and Cerezo are among the most remarkable. The greatest work of all is the Madonna de los Reyes, which Ferdinand and Isabella took with them into their tent during the siege of Malaga, and presented to the city after it was taken. The statue is of wood; on each side of the Madonna are kneeling the royal pair, also carved in wood and painted of various colours.

Before returning on board I made the acquaintance of the family of Mr. Rose. The son of Mr. Krause, whose uncle once entertained me hospitably in Swinemünde,—a youth of great promise,—had died a few days before in Malaga: he was to be buried this day, and I returned on shore immediately after dinner, to fulfil the last melancholy duty to a fellow-countryman. We made all the haste we could, hoping to reach the cemetery in time to witness the interment. The Protestant churchyard lies outside the city on the east. The sun shone fiercely, and on our way along the strand there was not a tree, save a few isolated palms. When we reached the spot, the body had just been lowered. This youth had won the affection of every one here. With our thoughts seriously tuned, and for the time diverted from surrounding outward impressions, we quitted the resting-place of our departed countryman, the peaceful burial-ground extending along the side of a hill. We returned to the city, and directed our steps toward the Alameda,

or public promenade: this word seems to be derived from *Al maidan*, signifying 'the place' in Arabic. And what town is there in Andalusia which does not boast its alameda? On our way thither we were accosted by some soldiers *en bonnet de police*, begging, who bared their mutilated limbs to excite our compassion.

All the beauty and fashion of the city was assembled, —some seated on chairs and benches under the trees, and the rest sauntering up and down. The ladies, with their mantillas and abanicos, or large fans, are generally speaking handsome, with small feet and dark eyes: almost all have a flower in their hair. The Spanish officers, whom we saw lounging about among the different groups, wear the French epaulets, but nearly twice the usual length: one soldier had fifteen decorations in three rows on his breast.

After our promenade, I went with several officers of the frigate to visit Mr. Rose, who had assembled a small party. The evening was passed agreeably: our attempts to talk Spanish, to play the agreeable to the Señoritas, most of whom understand only their own language, were highly amusing. The pretty daughter of the Consul, a fair-haired Spanish girl, and the only one who spoke German, played and sang some Spanish songs, boleros and fandangos. As we returned on board, the sea was brilliantly illuminated, and on taking some of the water into our hands, it sparkled like little glowworms. The current from the Straits is perceptible in the roadstead.

July 4th.—This morning we ascended the tower of the

cathedral, which commands a beautiful view. The city lies deep below: the eye wanders into the little square courts of the houses, with their colonnades and small gardens, which give an air of freshness to Malaga. The convent of La Vittoria is distinguished by two palm-trees in its courtyard. On this spot was pitched the tent of Ferdinand and Isabella during the siege. Further in the distance the Plaza de los Toros was pointed out to me, where the bull-fights are held in an amphitheatre. The view also overlooked the Alcazaba, which appears to form a triangle; it is surrounded by a wall, with numerous towers; and a covered communication, likewise between two walls, leads up the hill to the Gibralfaro. Both fortresses existed in the time of the first occupants, and the Alcazaba was a kind of citadel of the Moors. The valley of the dried-up Guadalmedina, ("the river of the city," in Arabic) recedes a little inland, and forms a kind of bay in the parched Sierra of the same name, which rises immediately behind Malaga.

From the cathedral we went to the Alcazaba, the original character of which has been entirely destroyed by buildings, only here and there the Moorish arches being still visible. The Consul obtained permission of the Governor for us to inspect the Gibralfaro: our way thither led us through the dirtiest quarter of this otherwise clean city: in these out-of-the way streets alone was the dirt as great as in Italy.

At the fortress there is indeed nothing remarkable to be seen: it consists of a circular walk between two walls,

running round the top of the steep hill, and two platforms for guns: a few cannons and a single mortar were mounted. There were plenty of wells, and ovens for baking, now in ruin, so that Gibralfaro could hold out for some time; but not far to the east lies a height, no longer fortified, which might easily be destroyed. The prospect is like that from the cathedral, except that from this spot there is a better view over the valley of the Guadalmedina. The dried-up river reminded me of the wide beds of the streams which descend from the mountains of Sicily, and flow into the straits of Messina. We were returning on board just as the San Michele fired the salute, which by the strange fancy of the Governor had been delayed four-and-twenty hours after our arrival. When the frigate ceased firing, the ancient banner of Spain, once so proud and mighty, was hoisted in the battery of San Nicolo, and the guns of the fort answered the salute.

After a hearty dinner at the Prussian Consul's, I accompanied Lieutenant Count Viry of the San Michele, Count Oriolla, and Count Bismark, to the little square, whence the diligence for Granada started. This was a vehicle similar to those in the *theatrum Europæum*, having a distant resemblance to the mail-coach. It took a long time for the eight mules, with their yellow collars, to be harnessed and put to; and it was past five o'clock when the passengers took their seats. At last the door was shut, and away we rolled.

On leaving the city, our road lay toward the mountains, passing blossoming aloes and oleanders, cactus-plantations and vineyards. The company in the diligence con-

sisted, beside ourselves, of an elderly lady from Granada, two young Hamburgers, and a Frenchman: outside in front sat two French artists. The conversation was naturally for the most part carried on in German, and opened with a description of the dangers of a journey to Granada, accompanied by tales of robbery and murders of the day. "The road to Granada must be very bad," began young Brinkmann; "I have heard say that more than one diligence has been lost in the ravines." Then the conversation turned on the band of five-and-twenty mounted robbers who were said to hold Malaga in a kind of blockade. "The diligence however is not attacked by them," said another, "for the proprietors have come to an arrangement with the banditti: but even in the city itself one's life is no longer safe: only last night, before ten o'clock, five murdered persons were brought in."— "That's nothing compared to the horrors of last Christmas in Seville," rejoined another; "there never was anything like that; just imagine five-and-twenty people murdered in one night!"

As we sat listening to these edifying anecdotes, the diligence crept slowly up the Sierra de Malaga. It had grown cool, and some of the travellers alighted, for a walk. Far away beyond the valleys, which extend between the rounded vine-clad hills to the sea, were seen the roadstead and our frigate. The stars came out, but the Sierra stretched further and further, and seemed interminable; at length all the passengers resumed their places. Eight persons were crowded together in a space which was not large enough for six. We sat as in an

omnibus, in two rows opposite to one another, knee to knee, so that there was not an inch of room to stir our legs. Sleep was out of the question in the heat and jostling we had to endure, although every one longed for a nap, to quiet his sufferings, shut up in this dark, stifling prison. For hours not a word was spoken, the only sound being an occasional deep sigh.

At length I had just fallen into a dose, when I was suddenly roused again. A man appeared at the door of the diligence, which opened behind like an omnibus; he had a musket on his shoulder. At first sight we took the fellow for a robber, but soon found that he was only one of the Guardias de Camino, whose duty it is to guard the public roads, and who was now stopping to demand payment for the trouble of escorting us. Most of these Guardias have themselves been robbers.

We ascended the hill at a trot. Many hours had now passed, and we had in vain been hoping for a halt, in order to stretch our legs, when at length we saw the light of a venta. Here we were allowed to alight, and have a draught of water. The landlord was lying on the floor: the room was small, and on the walls around hung pitchers and other utensils, as in an Etruscan tomb: a partition of reeds divided the chamber, and behind it slept the Padrona. The road now began to show some signs of life, from the strings of mules which we met from time to time.

July 5th.—At about four o'clock we alighted at another venta. Maria—all the women are here named Maria—lighted a fire in the middle of the room, around

which the passengers grouped; over the fire was a chimney like those in Westphalia, and here too the various utensils were suspended to the walls. One of the French artists contributed his little provision of chocolate to the common store. Eggs were boiled, the table was laid out, and napkins were given us, although the room was just like a stable. After supper we all went out; at a little distance before us lay the beautiful mountains of the Sierra de Antequera, with the moon rising above them.

The day dawned, and the diligence now called for us. We passed several pretty villages, one of which led through a wood of chestnut-trees and over a kind of barren plain, to Loxa on the Xenil, where we arrived between six and seven o'clock. As we drove into the little town, between garden-walls, a fellow with a villainous look came trotting after us, with a musket resting on his saddle. The Andalusian woman augured tragically—the pseudo-Cassandra—and whispered to me, "He 'll watch the diligence for certain when it starts tonight!"—for we had to remain here during the heat of the day.

The time passed quickly. Loxa is prettily situated: the valley is not very wide, and the tops of the mountains are barren, but the road passes under trees. Upon a rock in the town stands a Moorish castle, the Alcazaba. The women are handsome; the men have a characteristic look, and are almost all armed with muskets, carrying the bayonet sheathed. They wear tight, striped trowsers, or wide cloth pantaloons, slashed, with leather gaiters, open at the sides, and a jacket, which they throw round

them like a Dolman. Every one rides on a horse or mule. Here is seen a different kind of hat to that worn at Malaga, of a pointed form, with a tuft on the top. The beggars wear brown jackets, with standing collars, and wide, brown trowsers, generally with blue stripes. This is said to be the costume of the Mancha. In front of our posada stood a church, fitted up as a stable for the first royal regiment of dragoons. The uniform consists of a yellow jacket with a light-blue collar, turned up with the same colour, and brass epaulets and buttons. The persons standing in front of the stable also wore a sabre and a yellow cap. Some dragoons still retained the old uniform, with red epaulets and heavy sabres. The horses were in a miserable plight.

Our French companion in the diligence, who spoke Spanish, made himself very useful to the party, although in a noisy manner. The diet of the country did not please me much. The hotels and inns in Spain may be divided into three classes: the lowest consists of the venta, venda, benta; then follows the posada, and a large hotel is called a fonda.

At six o'clock in the evening the diligence started again. On the other side of Loxa we saw before us in the far distance the Sierra Nevada. The country through which we travelled was undulating, planted in parts with olive-trees. Our course lay, as it appeared to me, chiefly along the dried-up bed of the Xenil. The night was fine, but seemed interminable, and our past sufferings were repeated.

July 6th.—The stars began to disappear in the grey

twilight of dawn. Thank heaven, this endless night was past! There was a general stir in the diligence, as one after another awoke sighing and groaning. I twisted my neck to look out of the window, and find out whereabouts we were. A dark-blue mountain-chain lay on our left: then came a sudden jolt, and all was confusion to the eye. This had gone on throughout the night, and was caused by the numerous little ditches which traverse the valley. Single trains of mules, with their bells, passed us at intervals.

We had hitherto only met Andalusian peasants, mounted on tall horses, with their muskets fixed to the saddle; but we now saw from time to time a horseman bestriding a small, Turkish-looking steed, and riding proudly along the road. The saddle, trappings, and stirrups were of an oriental fashion, but the bridles were old Spanish, with immense curbs. The rider had a distinguished look, much more so even than the countryman or contrabandist, who glances proudly down upon you from his horse: he appeared to belong to the town. With the low Spanish hat stuck over one ear, and drest in a parti-coloured jacket, richly trimmed with braid, wide pantaloons slashed below, and short leather gaiters, a long narrow scarf thrown over the shoulder like a plaid, and his gun hanging at his side, —he rode along, in the fresh morning air, looking just like one of the Mexican horsemen in Nebel's sketches. The Andalusian woman stretched her neck out of the window, and said to me something in Spanish, which seemed to imply that she saw her home—Granada.

My cooped-up position in the diligence did not allow me any open view, and I had only an occasional glimpse of the country. Scarcely had I in the twilight caught, as it seemed, a view of a city, stretching along the hills, when it again vanished from my sight. At another turn in the road, I was able to cast a glance on the grand outlines of the lofty, extended Sierra Nevada, which lay before us clothed in deep blue. Then the city came again in sight, and every eye was gazing eagerly to catch a view of the Alhambra. One picture after another flew past the window, without our being able to command any general view of the country.

We could no longer endure being boxed up in this vehicle; the door behind was opened, and every one jumped out. The moment was opportune: the seven strong mules, which had drawn us from Loxa, a distance of eight leagues, without stopping, were being watered at a brook, and the diligence stood in the middle of the stream: with a good spring, we reached the dry ground. Before us lay the most glorious panorama that can be imagined. The morning mists rose from the noble plain, in which the Xenil and Darro join. The Vega of Granada may be regarded as an immense valley, encompassed on the west, north, and east by a wide amphitheatre of hills and mountains, and bounded on the south likewise by ranges of hills. This semicircle opens to the left of the Xenil on light blue hills, connected with a dark blue mountain of beautiful outline. In the foregrown, brown parched hills rise out of the plain, united at their base, and form a single slope of gentle inclina-

tion, on which the city of Granada rises in wide extent, from the midst of fresh green, rich foliage and cypresses. The summits of the hills above Granada are parched and barren, only here and there the cactus or aloe climbing up them. "Where is the Alhambra?" was the general exclamation. To the right, above the city, lay a small shady wood on the hill-side, on the skirts of which, as we approached, the old Moorish fortress rose more clearly to view,—a mass of red-brown towers and buildings, in the midst of churches and monasteries. Still higher up and further back lies the convent-like Generalife. On the right, a long naked mountain, levelled at its summit, forms a connecting link between the dark blue mountain and hills of Granada and the lofty, steep, and mighty Sierra Nevada. Behind this ridge the sun was just rising, and his rays tinged it with a glorious violet and rosy colour. This long mountain-range is indescribably beautiful, with its grand and noble outline. Here and there an isolated patch of snow lay upon its summit, whilst in other places the snow descended in scarcely perceptible, oblique, parallel stripes.

Touched by the first morning beams, the loftiest of the numerous little peaks, which rise from the sharp ridge of the Sierra, glowed like an alpine summit. The mountain itself long retained its dark, bluish tints, which gradually passed into a more transparent violet. Then the sun rose with dazzling brilliancy above the hills, clothing the upper third of the Sierra Nevada in the most exquisite rosy light; while the rest of the mountain assumed its usual, burnt and brownish tone of

colour, with the single, broad red-brown stripes which give it such a peculiar appearance.

Lost in admiration we gazed on the enchanting country, and had almost forgotten our old lumbering diligence, which was just rolling off. The seven mules, rested and refreshed, started at a gentle trot, and we had to hasten along at a good pace, not to be left behind. The brisk little Zagal ran by the side of his steeds, urging them on by words and blows; nor was this a trifle, for he had already kept up a trot nearly the whole eight leagues. The Majoral, the worthy conductor of the diligence, did not stir from his seat, but only held the reins with a proud air, whilst the Zagal, all activity, worked himself to death for his master.

Passing through a shady avenue we approached Granada. Our road led us past the point where the Xenil and the Darro unite, to the splendid Alameda: a profusion of the most beautiful flowers perfumed the air. Following this charming promenade, under tall, shady trees, with plashing fountains at each end, the traveller reaches the city from the south. Our diligence stopped at the custom-house, where the passengers separated; the German portion of the party alone remained together, and we pursued the streets which led, with a gentle ascent, to the Alhambra—the polestar that attracted us so strongly!

Through the Puerta de las Granadas, built in the style of Charles the Fifth, we entered a shady grove lying upon the acclivity, and traversed by broad walks, the Pasco de la Alhambra. The path widens: on the

left rises a high wall, against which leans the Pilar del Emperador, the Fountain of Charles the Fifth. Passing this, and taking a short turn to the left, we stood before the lofty Moorish arch which forms the principal entrance to the Alhambra. The paved way ascends, through the Puerta Principal, turning sharp to the left, up to the plateau of the fortress. We stepped out on the Plaza de los Algibes: on our right stood the square palace of Charles the Fifth, begun in the style of the revival of art, but left unfinished, with the round court-yard in the middle; on the left rose the towers and battlements of the Alcazaba. The portion of this old Moorish fortress not in ruins is converted into a prison. Opposite the east, a tent-like awning is carried along a wall, as a protection against the burning sun: it reminded me of the tents at Bakschiserai, under which I had seen troops of Krim Tartars waiting for a camel-race.

In continuation of these awnings, on the right, hidden by a corner of the palace, is the insignificant entrance to the famous summer-palace of the Moorish kings. A troop of criminals, chained, and guarded by a few soldiers, were just then entering. These men are employed by the Government, to assist the regular workmen on the interior of the palace, and the system works perfectly well, as our observation convinced us. A row of modern houses is erected on the entrance side of the Plaza de los Algibes, from which the little Puerta del Vino opens on to the square. Although it has now no purpose on this spot, it would be a pity if, as our French companions told

me, the beautiful Moorish arch were really the property of an Englishman; who knows but that he might carry it off, like the Elgin Marbles!

The breath of the South, with all its mysterious charm, was wafted to us through the lofty entrance arch of the Puerta Principal,—how did it captivate our senses still more on entering the interior of the Summer Seraglio! Any one who desires to witness Moorish architecture in its glory, in its full splendour and finest execution, must seek it here, and here alone: not even in the East is it seen in such perfection,—this at least is my impression. To me the Alhambra is a magical fairy-palace, with which nothing can compare. Let not the stranger be deceived by the external appearance of the lofty fortress, which sits enthroned above Granada like a mighty ruler; let him not look for spacious halls or imposing stone architecture, nor judge by the exterior of the jewel it encloses. Everything breathes loveliness and the perfume of roses in this magic castle, with its nooks and corners on every side, and labyrinth of cells, and cool, arched saloons, surrounding the charming little courts and gardens. Fairy-like and lovely, like a lady's perfumed jewel-casket, is the Alhambra!

The Patio de la Alberca, with its oblong basin in the middle, called also the Myrtle Court, from the hedges of myrtle which enclose it, surpassed all my expectations. And yet how entirely different is the impression produced on entering the adjacent Lion Court! The glowing fancy of the East was alone capable of creating such a place. The Patio de los Leones is the pearl of the

Alhambra, and perhaps the most romantic spot on earth. A shady colonnade, of light Moorish arches and fine slender marble columns, surrounds this little garden of Paradise,—solemn as a cloister, and charming as a picture from the Arabian Nights. On the narrow sides of the oblong square, the colonnade projects over the flowery carpet of the garden, like two little kiosks, with an overhanging roof. In the centre stands a monument of past times, the celebrated Lion Fountain, from which flow four little rivulets between myrtle hedges, to supply the fountains in the adjoining apartments. Here and there stands a young cypress, solitary and solemn, like the mournful watchman at the graves of the Moslim. Supported by the colonnade, dazzling white walls rise all around, covered with the richest arabesques in stucco, like a tissue of Brussels lace, as the Countess Hahn has correctly remarked, while the deep blue sky of Andalusia overarches it with its azure vault.

Lofty gates lead into the adjoining Salas de las dos Hermanas and de los Abencerages. These apartments are marvellously beautiful, the walls covered with arabesques, and rich decorations hanging down from the vaulted ceilings like various-coloured drops. The Sala de los Embaxadores is exactly similar, and is connected by the Sala de la Barca with the Patio de la Alberca. The Sala del Tribunal, which opens on to the Lion Court, is not square, like the former halls, but oblong: three doors lead into the colonnade of the Patio de los Leones.

The baths of the Alhambra resemble those of the Eski

Serai at Constantinople, which are lighted from above through the open tracery-work of their marble domes. With the Baños is connected the portion of the Moorish palace which Charles the Fifth and the Catholic kings had repaired for their use. An open gallery conducts on to the adjoining Tocador de la Reyna, resembling a tower, which stands out toward the precipice: it is here called Charles the Fifth's Pavilion. There is a magnificent panoramic view of the country from this room, the walls of which are ornamented with arabesques. Numerous bow-windows cut up the prospect into various charming pictures: the one commanding a view of the Generalife pleased me most.

The Alhambra forms a little town in itself, houses and lanes extending behind the unfinished imperial palace: within a short time, a pretty, neat fonda has been built at the top of the hill, of which we at once took possession. Here is also a church.

We enjoyed a view of the sunset from the Torre de la Vela, the tower of the Alcazaba, on which the Christian banners were first planted. From this point there is the grandest prospect over Granada and the plain, the Alhambra and the Generalife, with the lofty Nevada in the background. Centuries have passed since the Arabs quitted this paradise, the valley of Granada, and yet the traces they have left in the Alhambra remain to this day imperishable. On entering it, a person feels himself transported as by a magic wand to the East,—the land of imagination, of indescribable longings,—into the lovely yet solemn land of the East. The East has been a

happy dream of my early days. In the Alhambra—in Granada—I was transported thither again. Whoever has seen the Alhambra in his youth, will retain the remembrance of it, invested with a rosy light, to the end of his days. I feel myself perpetually attracted thither in thought. From the battlements of the old Moorish fortress, the breath as it were of the East seems to be diffused over Granada and the whole valley.

From the Torre de la Vela we descended to the Alameda,—unfortunately too late to meet the beauties of Granada; but instead we saw an act of Lucia di Lammermoor in the theatre close by. The stars shone brightly over the romantic little wood of the Alhambra, as we returned home late in the evening.

July 7th.—This morning we took a walk to the Generalife. The first of the small gardens in the interior of the palace is similar to those of the Alhambra. The building lying directly opposite the entrance contains a beautiful Moorish gate, leading into a vaulted hall, the ceiling and walls of which are ornamented with the same kind of lace-work and suspended drops as we had observed before. On the left an arched passage with arcades and windows enclose the garden. The view of the Alhambra from this passage is wonderfully fine, its towers and battlements rising out of the wood on the further extremity of a small intervening valley. The Generalife also contains a second, less remarkable court or small garden. Here stand the two cypresses, under which, as the legend tells, the romantic love-intrigue was discovered which led to the murder of the Abencerages.

On the acclivity above the Generalife is built a small, modern pavilion, which affords a still more extensive view. Granada lies grouped around the foot of the Alhambra: on turning round, the Sierra Nevada is seen rising above the hill; while toward the south, we were shown the height from which the Moors, as they departed, cast a parting glance on Granada: it is still called "El ultimo Suspiro de los Moros." I spent the rest of the morning in sketching in the Alhambra. The heat was intolerable: the workmen in the Lion Court appeared to be in eager conversation about the last war.

In the afternoon we mounted our horses, and rode to see the remarkable features of Granada. We first went to the cathedral, which has a great resemblance to that of Malaga: the choir is here likewise in the centre. The walls of the Capilla de San Miguel are adorned with the black marble of the Sierra Nevada. In the Capilla San Bernardo is a beautiful altar-piece by Boca Negra. The high grating of the Capilla Real, which divides the high altar and the tombs of the kings from the other part of the chapel, was unfortunately shut, and there was no means of gaining admittance on this day. We saw the holy image of "Nuestra Señora de la Antigua," which was borne before the army that took Granada: Ferdinand and Isabella presented it to the city. We came too late to the church of San Juan de Dios, and thence rode to the Cartuja, crossing on our way the Plaza del Triunfo, in the centre of which stands the statue of the "Virgen de Pilar." Upon the wall of a garden on the left grew two palm-trees—the first we had seen since

leaving Malaga. The Plaza de Toros lies on the same side. Upon the heights, to the right, are seen two Moorish gates, lying one behind another,—the Puerta del Bira and the Puerta de Monarca, in the Barrio de Albassin.

Passing between high walls, we reached the Cartuja. The churchyard attached to it is a beautiful garden, planted with cypresses. The church contains some treasures and precious works of art,—amongst others, four Murillos and several pictures by Cano: in the Capilla Santa Santorum is a splendid collection of different marbles. The sacristy contains two beautiful Nuns, by Murillo: the closets, or tall cabinets, on the walls are inlaid with tortoiseshell and ivory.

From the Cartuja we went up to the little chapel of San Miguel el Alto, which stands upon the heights above Granada. On our ride back, the Sierra Nevada lay before us; we reached the chapel just in time to see the sunset from this glorious point of view. Beneath us, on the left, lay the Generalife, and the red-brown Alhambra with its abrupt towers, separated from us by a deep valley. The steep, wooded hill, which they crown, stretches like a tongue of land into the city of Granada. On the slope of the hill upon which we stood are rows of aloe-hedges; the old Arab wall runs along it, and may be traced down into the city. The wide, verdant plain, with woods and fields, bordered by parallel ranges of hills, extends up to Granada; and in this plain rises the black, isolated Monte Santo, whose points were more sharply defined by the sun going down behind it.

From San Miguel we proceeded across the deep valley to the Alhambra. On reaching the foot of the wooded hill, we struck into a path by which the Abencerages used to pass from the Generalife to the Alhambra: it climbs in a wild and romantic manner along the bed of a murmuring wooded rivulet: a small aqueduct still remains on one side. We rode through a little gate at the back into the castle. All the inhabitants of the Alhambra were assembled in the garden of our fonda, to see the dances of a band of Gitanos, which however did not please us much. The gipsies of Granada are not at all cleaner than those I had seen in Moscow. Before retiring to bed we took another turn in the courts and halls of the Alhambra. Had it been moonlight, we should have been tempted to spend the night in the Arab castle, but the darkness took from the spot something of its romantic interest.

July 8th.—The refreshing cool of evening at length succeeded a sultry day: the sun was setting just as I stepped on to the balconies of the Torre de la Vela, to spend the last moments before my departure; and here I bade adieu to the charming Alhambra, the remembrance of which I shall retain through life.

At eight o'clock we rode under the tall, arched Moorish tower, and down through the little wood,—a shady promenade much frequented in the twilight hour, —into the city, and again in front of the cathedral. We had ordered the sexton to show us the tombs in the Capilla Real, but he had by ill luck gone away, and was nowhere to be found: we therefore continued our ride

past the Alameda, in the clear starlight night. Numerous large fires, of burning weeds, were kindled in the fields. Our way led us through several little hamlets, which looked like the suburbs of the city.

After proceeding thus for several hours, we at length reached the heights of "El ultimo Suspiro de los Moros," where we again took farewell of Granada. From this point we saw the long line of lights in the city, at the foot of the dark hill,—the heights once past, it was seen no more. On leaving the next village we took a draught from the leather bottle which we had procured in Granada, and then gradually ascended another hill, on the top of which we met a train of mules, that separated us from our guide. For some time we were left to ourselves, and the road was so bad that we were at last obliged to dismount. On rejoining our guide, we rode to the village of La Mala, on the other side of the hills, passed through it without stopping, and soon after came to another village, where we halted at a baker's shop. The man at first would not open his door, but having at last prevailed on him to do so, we satisfied our hunger, and then pursued our way across the plain. The smooth, level road seemed made for a good trot, and we reckoned that, at this pace, a couple of hours would bring us to Alhama, where we intended to rest. This was however impossible, unless I let the driver of the lame pack-horse run by his side, in Spanish fashion: but, although he was a stout fellow, and probably not less indefatigable than the Zagal of our Malaga diligence, yet I could not bear to make a

man slave like a horse. Anticipating this result I had ordered our Arrieiro to engage a mounted attendant; but he had not kept his word, and we were thus condemned to ride the whole night long at a foot-pace.

This however was not the only cause of complaint; it was settled that we were to have the same horses today as yesterday: the Arrieiro had made a high charge for them, but as the beasts proved good ones we had not grumbled. This evening however, just as we were about to mount, we found that, instead of our former horses, the man had brought us some old, jaded mares: I was the only one who retained his steed. All the saddles too were changed. The caravan had hitherto suppressed their just indignation, but it now broke forth, when we saw that our night journey would be prolonged several hours through the knavery of this fellow. A formidable conspiracy was now hatched,—we agreed amongst us to plague and tickle the guide's jackass the whole night long, to prevent his going at a regular pace for a single instant, and this office we were to take in turn. Thirsting for revenge, we hoped in this way that the crafty Arrieiro would have neither peace nor quiet, and perhaps expiate his sins more fully by a good chafing from his ride: this thought animated our weary spirits. The knavish little fellow leaned comically forward on his jackass: every means was tried to induce him to dismount and go on foot, instead of his servant-lad, but in vain. He grew more and more malicious,—the proud Spaniard awoke within him, and pointing to his pistols, he declared that he would defend him-

self with those little instruments: a shout of laughter however soon silenced him.

It was about midnight, when Count Oriolla proposed to remain behind with the guide on foot, and allow the rest of the party to hasten on before. This disinterested offer was thankfully accepted, and away we went at a brisk trot in the dark, which however from the bad state of the road soon subsided into a snail's pace. Tired out we had almost fallen asleep, when suddenly our little conductor made us dismount. The road here descended steeply into a wide valley; a venta stood by the wayside, —the temptation was too great—we entered, and the world without was soon forgotten in peaceful slumber.

The short halt we had proposed to make was prolonged to above an hour. From this point we crossed the valley, through which flows a little stream called the Fuente de Bãnos. The day dawned, as we skirted the opposite side of the valley. Here we overtook Count Oriolla, who whilst we were asleep had passed the venta with his companion on foot. Leaving the valley of the Fuente de Bãnos, we entered on a wide elevated ridge of ground.

July 9th.—The sun rose this morning on a completely Greek country,—an elevated plain, crossed by valleys in all directions, without tree or bush, and backed by a beautiful and sharply defined mountain-ridge, the Monte del Nevazo, which was gloriously clothed with a deep blue and violet colour. We had still an occasional glimpse of the Sierra Nevada, which lay behind us, veiled in a transparent mist; its outline was nearly the reverse of that seen from Granada. The plain along which our

route lay now descended, and a stony road led gradually down into a deep ravine, terminated by a small white town, on the top of a limestone rock rising perpendicularly from the valley. Alhama lay before us,—the complete counterpart of a Greek town. On our way we passed several paved thrashing-floors, on which the corn was thrashed in the open air.

Tired out, and straggling, our caravan rode up the rock in a zigzag course. Far behind us followed the Arrieiro's lame servant with the lame pack-horse; his tall pole was no longer any help to him. A great number of mules and donkeys were congregated in the market-place, which swarmed with armed peasants. At seven o'clock we stopped at our posada: a group of Andalusian peasants had collected in the house, all drest in their picturesque national costume,—breeches with rows of buttons, slashed leather gaiters, and a little felt or black velvet hat with two tufts stuck at the side. They were all seated round the table, in their shirt-sleeves, with jackets thrown over their shoulders, their warlike, sunburnt features animated by wine and conversation. These men were very curious to inspect our pistols, but above all the fine powder astonished them. Then one after another each fetched his old-fashioned musket, with its clumsy stock, and opening a motley leather pouch which was girded round his body, poured some powder into our hands. They all boasted of having fought in the last war. Among the rest was an old chap with a dark-red visage, and a mouth that reached from ear to ear, but set with a row of brilliant white

teeth, who was escorting a transport of prisoners to Granada. "I always treat my prisoners well," said he, "for who knows but that I might myself kill a man in the heat of passion, and then I should be transported!" The Spanish peasant considers murder a very trifling offence. The other guard of the prisoners had all the noble look of a Greek palikar. But I had almost forgotten the most interesting occurrence—to us at least. Shortly after our arrival at Alhama the Arrieiro secretly went off to another party. He first despatched this new caravan, staying behind himself till the last moment. My horse, which was the only fast and still active beast left, he had prudently retained,—it stood ready saddled in the stable. Count Oriolla observed that the knavish little fellow was bent on some mischief, and he determined to take him before the alcalde; but just as he was changing his coat for this purpose, the culprit slipped away, and my horse carried him off as swiftly as an arrow. Count Oriolla and Mr. Brinkmann, after toiling for hours, succeeded in finding another Arrieiro, who was however only able to furnish us with one mule and the necessary complement of donkeys.

At five o'clock P.M. we left Alhama, much more fresh and brisk than when we entered the town. The first point toward which we directed our course was Velez Malaga. Immediately at the back of Alhama we again ascended a barren plateau: behind us lay the Sierra Nevada, and before us the steep Monte del Nevazo, with its sharp outline, which the setting sun was beginning gradually to illumine. Our path led us round this moun-

tain (said to contain silver), into a lovely valley planted with olive-trees and encompassing its foot. We soon came to another mountain-chain, of strange form, which we had to cross. Night had already veiled the valley at our feet, and in the far distance the last gleam of day-light rested on the sea, which vanished in the mist. In an instant it was pitch dark. The stars began gradually to appear, but their light was too feeble to show us the way along the steep, rugged path. Our column was straggling and far apart; Count Oriolla on his spirited mule soon distanced the rest of the party. Before me walked the Arrieiro's brisk young lad, driving the sumpter-mule. Every now and then snatches of some melancholy air, sung by the Arrieiro, reached me, and from the scarcely audible tones of this monotonous and truly national melody I judged that he must be far in the rear. On starting from Alhama our guide had marched briskly along, shouldering his musket, but he now began to lag behind. "Hombre! hombre!" cried the old man repeatedly to his young comrade; and the last, long-drawn syllable died melodiously away over our heads, whilst in the same tone the word was echoed back; the sound gave us a means of measuring the extent of our caravan. Spaniards so commonly address one another by this term "Hombre"—man—that even little boys have caught the expression, which sounds oddly enough.

We were just beginning to descend the dark declivity, when the Arrieiro called in a loud voice for the advanced portion of our troop to halt. The rear of the caravan was at last brought up, and our old guide now begged us

to remain together, as it was not unlikely that in this part of the road we might fall in with robbers. Count Oriolla, on this hint, put his pistols in order, and then giving the reins to his beast galloped off and was speedily lost in the surrounding darkness. Count Viry also prepared himself for battle, tying his pistols round his body with a red pocket-handkerchief; but at last overcome by sleep, and in a state of half oblivion, he quietly slid over the neck of his jackass; this accident had the effect of rousing him, and he soon recovered his seat.

On the narrow path along the dark valley we passed several small troops of country-people on mules, all armed. Young Brinkmann had over-exerted himself, in his efforts for the general good, not having closed an eye since we left Granada: he was now fairly tired out, and we stopped at a house by the wayside to get a draught of water, for the night was warm; among the inmates of the house we found—where we least expected it—a strikingly handsome Andalusian woman.

A short stage brought us to the next regular venta. Huge cactuses, like those in Sicily, and tall aloes stood near the house,—a proof that we had entered on the coast-region. We all stretched ourselves on flour-sacks in the venta, and soon fell asleep, while troops of mules were continually passing by. I left my crooked vinestock —my travelling companion for more than six years—on the bench before the door: when I awoke, it was gone! It is now wandering about in Andalusia—who knows into what hands it may have fallen! It was one my mother had given me when we were on an excursion in Silesia. I

had intended that it should have visited Africa and America, and then quietly have reposed on its laurels in a corner of my chamber, but its fate has fallen out otherwise!

The venta was soon left behind: the toil of riding without stirrups, on a sack, in place of a saddle, grew irksome, and one after another of our party dismounted and went on foot. We crossed a brook, in a narrow valley, and at length arrived at the village of Vinuela,—it looked like an abode of the dead! In one house only was a light visible, around which were clustered a group of people, chiefly women. I was told that a corpse was lying in the house. At the end of this village, by the roadside, a large party was bivouacked: fires were still glimmering here and there. Our first thought was that these must be robbers or Gitanos; they however proved to be only country-people, journeying from place to place during harvest-time. The valley grew more and more narrow and wild, and below us we looked down into a dark abyss. This continued for some distance; fatigue at length overpowered us, just as the day began to dawn.

July 10*th*.—The cool morning air made us glad to dismount and proceed on foot, driving our tired animals before us. A thick orange-grove, perfuming the air all around, completely filled up the lovely valley; while tall cactuses, flowering aloes, oleanders in blossom, and high reeds, lined the broad, level road. The mountains on each side rose in numerous lofty domes, similar to those around Malaga. An exquisite, rosy, morning mist suffused the landscape and the Sierra, which we had passed early in the night, and which now rose above the valley

at our back. A turn in the road disclosed to view Velez Malaga at a short distance before us, from which the old Moorish castle rises like an acropolis.

We halted at Velez to rest and refresh ourselves, and then took our seats in the coach that was to convey us to Malaga. If the Malaga diligence was like the coach in the *theatrum Europæum*, this vehicle was much more so still; we were indulged with a perpetual jolting and shaking. The view back upon Velez and the green valley was truly enchanting. Seven tall, noble palm-trees stand in this little town, and behind the Moorish fortress are seen the sharp, grotesque outlines of the lofty Sierras, the highest mountain among which is the rounded Sierra Tejeda, visible at a great distance.

The sea at length again appeared in view, and a fresh breeze from the east swelled the ship's sails. We now kept along the sandy shore, toward which the high land descends, partly in hills and partly in rocks, more or less distant from the sea. Upon each of the numerous projecting headlands that we passed stood a tower, which in times of old served as a protection against the Moors. There are likewise two forts between Velez and Malaga, the first of which is called " del Marquez." The heat was intolerable, and we at length rounded the last point. Before us lay the ' San Michele ' at anchor in the roadstead, and Malaga, at the foot of the mountains which descend toward the strand. We took leave of our two Hamburg companions, and returned on board. In the afternoon all the preparations were made for sailing the next morning: meanwhile some Spanish ladies visited the frigate.

THE STRAITS OF GIBRALTAR.

JULY 13th.—I was aroused from sleep by a guard of marines,—we were approaching the anchorage. The wind blew keen, as I hastened up the steps. Although the day had scarcely begun to dawn, all were astir on the deck of the 'San Michele.' The Rock of Gibraltar rose close to us with a threatening frown, like a huge giant, sending his violent squalls down upon us: the slender masts of the frigate bent under their fury. Europe and Africa, veiled in the dim twilight, appeared to form one continuous line of coast, and it was some time before I observed that we were already in the bay of Algeziras. I looked up aloft: the topsails were all furled, yet the mighty ship creaked in every timber. All were on deck,—every officer at his post, and the manœuvre-divisions grouped around the foot of the masts: the boatswain and his mates had set the silver whistle to their lips. All eyes were fixed on the quarter-

deck: there stood the Captain, with the speaking-trumpet in his hand, awaiting the moment when the dark brow of the Rock, which frowned upon us, should clear. The shock passed, and the squall subsided: the heavy stern of the frigate rose slowly up, and the ship breathed as it were freely again, and felt all her youthful strength return. M. d'Arcollière now ordered the topsails to be set: hundreds of footsteps instantly answered the command. The crew, drawn up in long lines on the deck, moved backwards and forwards, to the measure of the shrill fifes: all around was a chaos of sailors, soldiers, and ropes, in which a landsman's eye sees nothing but confusion, whereas it is precisely in this apparent crowd and bustle that everything is regulated with the most perfect order. The officers encouraged the men to alacrity, and hardly were the topsails filled, when the command was given to wear the ship round, in order to bring her up to the anchorage by short tacks; because, from want of sufficient acquaintance with these waters, the Captain would not venture too far west toward Algeziras, nor on the other hand too near the Rock, within its sweep, on account of the squalls that descend from it in violent gusts. We were thus obliged to tack at least half a dozen times, for toward morning the wind had suddenly shifted round to the east, in which quarter it is always accompanied by squalls from the Rock.

Day at length dawned. Two ships of the line, the 'Thunderer' and the 'Formidable,' were lying in the roads; and as the frigate ran in, they hoisted their flags,

even before sunrise, in compliment to her, whilst the Union-jack was displayed on the fortress. On entering the bay, the mountains of Africa lay behind us in the blue distance; we passed close under the stern of the 'Thunderer,' and anchored at half past six A.M. in nineteen and a half fathoms' water, nearly in a line with, but a little to the south-east of, the two ships.

The Rock of Gibraltar is recognized by the sailors at a great distance: I saw it first yesterday morning between eight and nine o'clock, just after we lost sight of Cape Mulinos. The beautiful mountains of Spain descended gradually toward the west and south, until they were levelled to a scarcely perceptible plain. With this were connected other hills, at the end of which Gibraltar projects into the blue sea, like a small, insular-looking rock. At a short distance,—separated only by the Straits,—the Apes' Hill rose like a truncated pyramid from the waves, clothed in light vapour, whilst the adjacent coast of Africa was continued on the left, like the faint outline of a height, until it was lost in mists. Thus for the first time I greeted simultaneously the Pillars of Hercules and the coast of Africa,—that still unexplored and desert quarter of the globe. A few moments later the Rock of Gibraltar intercepted the view of the low hills of Andalusia, the last spurs of the Sierra Ronda or Bermeja; until at four o'clock in the afternoon it was again seen distinctly separated from them. It now appeared to form a perfect island,—the Neutral Ground, the flat isthmus that connects it with Spain, not being yet visible. The Rock of Gibraltar,

seen from this side, has the form of a trapezium, upon the straight ridge of which, to the north, rises a scarcely perceptible elevation, whilst at its foot Europa Point advances from its steep southern wall into the Straits, like a short, flat heel.

Several ships were cruising, like us, sheltered by Gibraltar against the west-wind, and awaiting the favourable east-wind to carry them out to sea; whilst others, beyond the isthmus, which was not visible, lay at anchor in the bay of Algeziras. The Apes' Hill grew more distinct, and, as we looked obliquely across the Straits, appeared to be connected with Gibraltar by a small chain of hills, which we soon recognized as the line of coast between that mountain and Tangier. At six o'clock in the evening the view was more clear and defined; Africa and Europe were distinctly separated. To the left of the Apes' Hill we saw Ceuta, with its high-seated fortress. The evening mists suddenly arose, divided the rock of Ceuta as with a knife, and at length made an immense horizontal opening into its centre, which presented a very remarkable appearance. Night soon set in; the light on Europa Point guided us like a bright star in the dark; it was not extinguished until the day began to dawn.

We now surveyed from our anchorage the bay of Algeziras, like a glorious panorama, receding deep inland, and stretching between Cape Carnero on the west, so dreaded for its rocky reefs, and the proud Gibraltar on the east. On the western and northern sides it is enclosed by brown, parched hills, extending from the west-

ern point, to the gently inclined pyramid of the small mountain which bounds on the north the flat tract of the Neutral Ground; toward the latter this mountain descends steeply, and the English call it by the name of "The Queen of Spain's Chair." Not far from Cape Carnero, the white town of Algeziras rises from the blue waves: before it lies a small island, called the Isla Verde, and a large Spanish brig of war was just then in the roadstead. Upon a hill further to the east rises San Roque. The sandy isthmus of the Neutral Ground, and the perpendicular Rock of Gibraltar, resembling a lion stretched out at rest, form the eastern side of the bay. Like the other heights which encircle the bay, it has the same brownish, burnt colour as Malta and the Greek coast; this however is said to change in the spring to a crimson tint, when the *Cyclamen Neapolitanum*, which clothes it similarly to the tufa rocks in the neighbourhood of Naples, is in blossom.

The town stretches along the seashore at the foot of the Rock, commencing at its north-western corner close to the Neutral Ground, and extending to about the centre of its west side, up which it rises to a third of its height. Gibraltar from a distance has a neat and clean appearance, and gives an impression of being rather a stately town*. In the direction of Europa Point extend

* I am indebted to the kindness of the Rev. Dr. Pischon for the following historical account of Gibraltar. The first landing in Spain took place as early as July, 710. Taric ben Zeugad effected a second landing on the 28th of April, 711, on the green island of Gezira Alhadra (whence Algeziras), and encamped on the extreme point of the moun-

green plantations, cottages and large single buildings, chiefly barracks, magazines, etc. From the roadstead

tain of the Peninsula, which was thenceforth called Geb al Taric (Mons Calpe of the Romans),—either Mountain of Taric or of Conquest. The famous battle on the Guadalete, the present Xeres de la Frontera, was fought on July 18–26, in the year 711, and led to the overthrow of the empire of the Visigoths. After the conquest of Seville by Ferdinand VII. in 1248, Gibraltar, as well as many of the southern towns, Niebla for instance, must have fallen into the hands of the Castilians. Muhammed ben Ismail, of Granada, took Gibraltar from the Christians in 1333, after which it was besieged by Alfonso XI., but in vain. Abul Hassan of Fez conquered it; Muhammed ceded it to him, and once more saved it from the Christians. In 1349 Alfonso besieged Gibraltar again, but his death in 1350 frustrated his hope of gaining possession of the town. In 1462, under Henry IV., Roderigo Ponce and the Duke Medina Sidonia captured the fortress, without difficulty, while the garrison were absent at another battle. In 1540 a subaltern officer of Hairaddin Barbarossa took Gibraltar, and carried off considerable booty; but General Mendoza soon recaptured the fortress, and either took the infidel garrison prisoners or slew them. In the Spanish War of Succession, the British Admiral Rooke, with the combined English and Dutch fleets, in conjunction with Prince George of Hesse Darmstadt, who conducted the land-expedition as a volunteer, took Gibraltar, which Philip V. in vain afterwards besieged, and finally at the Peace it was ceded to England. On the eleventh of February, 1727, the Spaniards under the Marquis de las Torres again besieged Gibraltar, but the attempt failed. In the American War Spain attempted to recover possession of it, and besieged it through the instrumentality of the minister Florida Blanca, from 1779 to 1783, by land and sea: these terrible attacks however shook neither the Rock of Gibraltar nor the courage of Eliott. The project also of starving out the inhabitants was frustrated by the storm on the 10th of October. Admiral Howe introduced supplies of food, and at the peace Gibraltar remained in the power of England. The last attempt to take this place likewise failed, if indeed it was ever seriously intended, when the French in 1810 and 1811 approached the fortress, whose rock,

" goes, they projected to blow up.

are also distinctly seen the lines of the town and coast fortification, and a portion of the embrasures of the celebrated Excavations, the Galleries, which are formed in the rock in several lines one over another on the north-west corner. From Europa Point the view extends over the blue horizon of the Mediterranean to the hill of Ceuta, rising like an island veiled in a transparent mist, and the chain of the Apes' Hill: the latter closes the panorama on the south.

Immediately on our arrival I received some visits, and then landed. We threaded our way through a great many ships, lying in the roadstead, together with mistics, boves and other small coasting-vessels with lateen sails, which usually lie off the Neutral Ground in considerable numbers. These boats carry on a wholesale smuggling-trade from Gibraltar to Spain, which England not only allows but even protects. The small Government steamer the 'Lizard,' lies constantly ready, at the first signal given from the Rock above, to hasten to the assistance of the smuggler when pursued by the Spanish Guardias Costas. The 'Lizard' either tows the smuggler into Gibraltar, or places herself between that boat and the Spaniard, so that the latter recognizing the British flag dares not fire.

We landed at the Water Port, at the north-west end of the town: a small group of Arabs and Spaniards were collected here. These two nations, intermixed with English soldiers and sailors, constitute the inhabitants of this clean and prettily built town, in which the Spanish architecture is found united with English comfort.

The various costumes of the numerous Orientals are in part very handsome: some wear crimson cloaks, but the majority a white burnu, or a similar garment of equally light stuff, but very strong, striped white and black or dark brown. The characteristic white turban is seen frequently, but many go bareheaded. Beside the Arabs and Berbers, there are in Gibraltar many Jews from Africa, who are drest in a garb similar to that of their Polish brethren, but more smart. Among the English troops here the Highlanders of the Seventy-ninth regiment are particularly striking. The same variety of Spanish costumes is seen here as in Malaga; almost all the women are clad in the Spanish dress,—even the Jewesses, who wear scarlet, hooded cloaks, with a broad velvet trimming.

The Governor, Sir Alexander Woodford, received me with the greatest courtesy; I found him with Lady and Miss Woodford in his drawing-room, which looks on to a small garden, rich in all kinds of exotic plants; among these a beautiful dragon-tree and a splendid oleander were peculiarly striking. Sir Alexander desired Colonel Brown, the Commander of Artillery at Gibraltar, to accompany me on horseback to visit the Lower Batteries, that is to say the whole of the coast-defences, from the town to Europa Point.

As soon as we passed the town, the gigantic limestone rock rose steeply at our side, like a colossal pyramid. With its base is connected the horizontal plateau of Windmill Hill, descending perpendicularly 330 feet to a second short plain, Europa Point, which terminates in

a steep declivity of 105 feet to the sea*. Upon this summit is stationed a battery, on which waves the Union-jack; and close by, but a little to the north-east, stands the new lighthouse, so serviceable to mariners, the foundation-stone of which was laid by the Dowager Queen Adelaide. Among the green shrubberies and olives, which extend from the town toward Europa Point, are seen neat detached houses and true English cottages, nay even a little village. From Europa Point we rode past the Governor's pretty cottage, a short distance along the eastern coast, to the spot where the rock descends perpendicularly like an enormous wall into the sea. We returned over Windmill Hill, and through the new shrubberies, in which are placed the busts of the Duke of Wellington and General Eliott: among numerous other exotic plants, a pepper-tree was pointed out to me. Close by is the Parade-ground, which is here called the Almeida. In the evening I dined with the Governor; the military-officers, according to the custom here, wore short red jackets, and the artillery-officers, the same of a blue colour, with white waistcoats and cravats.

As I returned on board, the night was closing in, and the black Rock of Gibraltar had exactly the appearance of a gigantic couchant lion, with innumerable lights glimmering upon its sides; as if Nature had thus in-

* The Admiralty chart here perfectly agrees with the accounts of Spix and Martius. In some other parts they differ widely, and I have then followed the Admiralty charts, as the latest authority. The height of Europa Point is given from the statement of these two gentlemen.

tended to indicate, that she had chosen the Lion of Britain as the future guardian of the Mediterranean. The Rock has only this appearance when seen from near the Water Port: on approaching the roadstead, the picture changes*.

July 14th.—This morning I landed at half-past five o'clock, intending to ride over the remaining part of the fortifications with Colonel Brown. He conducted us, past the tower attached to the old Moorish castle, to the Excavations. These extraordinary and spacious galleries commence above the north end of the town, running round the north-west corner of the Rock in several connected stories, and then extending to the perpendicular wall of rock, with which Gibraltar descends toward the Neutral Ground. Passing through these galleries we came to the Rock-Gun-Battery, which lies above them, and from thence along a narrow path to the Signal House. This building is situated on the ridge of the Rock, at a height of 1255 feet above the sea. In front of it stands a small mast and yard for hoisting signals. The old artilleryman who inhabits this lonely station, and whose duty it is to survey with an eagle's glance all that passes upon the waters below, and then to telegraph the news by coloured signal-flags,—in a word, the Eye of the Lion of Gibraltar,—manages to render a stay upon this elevated spot pleasant both to himself and others. The

* The sailors sometimes compare the Rock of Gibraltar to a man's foot, the heel of which is formed by the steep north side, whilst the toes point toward Africa.

merry old man offered us a glass of his excellent porter, explained the view, and sold us some small cannons which he had made out of pieces of the rock. The rock consists of Jura limestone, that is, of compact limestone traversed by veins of calcareous spar, which takes a beautiful polish. We found here, as upon Mount Pellegrino, large cavities, both on the rocky acclivities and in the massy boulders formed by the action of the waves. Among these stones grows a dwarf palm, with a small stem just like other palms; I have seen this also in Sicily, but very rarely. The view down from this spot must in clear weather be wonderfully fine, but the distance was today unfortunately veiled in a mist, which prevented our distinguishing either the mountains of Granada or the coast of Africa, although so near. This mist generally prevails with an east-wind, and is indeed at times so thick, that ships have mistaken Apes' Hill for Gibraltar, and been wrecked in consequence. On the contrary we could survey the Rock distinctly, with all its fortifications. We had been made acquainted with the greater part of the works, during our rides on this and the previous day, under the intelligent escort of Colonel Brown, who not only took great pains to show us everything important in the defences, answering all our questions readily and with frankness, but also gave us a general picture, a clear survey of the whole.

The summit of the Rock of Gibraltar forms a sharp ridge, which stretches from north to south; this line however does not lie exactly in the middle between the

west and east sides, but approaches nearer to the latter. On the south the mountain descends, as we have observed, in terraces, at first perpendicularly toward the plateau of Windmill Hill, then toward that of Europa Point, and lastly steep down to the sea. The form of its base would not be unlike an isosceles triangle,—its small side on the north, and the longer east and west sides united at a sharp angle at the south,—but that two projections, one at the New Mole on the west side, and the other near the Sugarloaf on the east, break this figure*. The east and west sides run at first parallel from north to south, until the western coast turns sharply to the south-east just below the New Mole, in the direction of Europa Point; the east coast scarcely deviates from a straight line. The north side is a perpendicular wall of rock. The west side on the contrary has an escarpment from the top of the rock at an angle of 20° to 30°; it then descends perpendicularly eighty to a hundred feet, and slopes off with a gentle inclination toward the line of coast.

This slope admits of cultivation on this side of the Rock, and the erection of a town; English perseve-

* The length of the north side is ..... 1910 paces.
The greatest breadth from the New Mole to the Sugarloaf on the east ..... 2040 „
The length of the highest ridge of the peninsula is about ..... 3000 „
The base of the Rock from north to south ..... 5340 „

The reader who desires further information is referred to the interesting article on Gibraltar in the Archiv für Offiziere der Königlich Preussischen Artillerie- und Ingenieur-Corps, vol. 5. page 34.

rance has even succeeded in planting trees here and there, which flourish in spite of the barrenness of the soil. The last two-thirds of the mountain are too steep to be built upon. On the east side, like a continuation of the plateau of Europa Point, a short tract of flat land extends under Windmill Hill, up to the point where the line of coast turns from its first more N.N.E. course directly northward. The perpendicular rock here re-appears, and in some places becomes a steep acclivity. The English have bestowed the greatest attention on the land-front; it was toward this side that, during the famous siege, the enemy's fire was most obstinately directed, while the English were harassed by the batteries which the enemy had constructed upon the sandy isthmus. The batteries at that time erected on this side of the Rock are said to have suffered most severely, although from their extraordinarily high position the fact appears almost incredible. This is even said to have been the case with the Rock-Gun *, placed at an elevation of 1337 feet above the sea,—a point which exceeds the height of the Signal House by about eighty-two feet, and is little

* On the 12th of October, 1779, a twenty-four-pounder was placed on this spot, and called the Rock-Gun. On the 17th of April, 1781, a shot first reached this point, whilst in May scarcely a day passed without some one being wounded by this cannon (see "A History of the late Siege of Gibraltar, with a description and account of that Garrison, from the earliest periods," by John Drinkwater, Capt., pages 148 and 158). But a still more remarkable circumstance is, that shells from the enemy's mortar-boats, stationed opposite the Old Mole, flew over the ridge of the rock, and fell in different places on the east side. (Drinkwater, pages 157 and 179.)

lower than the highest summit of the mountain above Windmill Hill, the Sugarloaf, which rises 1408 feet above the sea.

Among the lessons which the English derived from experience during the siege of 1779 to 1783, so remarkable in many points of view, the most important was, the necessity of keeping the Spaniards at as great a distance as possible on the isthmus, both because this is the only side on which a regular siege is possible, and likewise to prevent being too closely shut in on the land-side, and to keep an outlet open. These considerations led as early as the year 1789 to the creation of the "Excavations," which offer the necessary protection to artillery, and give it at the same time a wide field of action. In six years this gigantic work was completed*.

It appeared to me that too great a force was concentrated upon this point; for in the first place, a colossal, perpendicular rock requires no defence, and again its

* Chance first led to the construction of the "Excavations." In the summer of 1782 an opening was made in the north wall of the Rock, to admit light and air to a gallery that lay behind, which was only to serve as a communication and shelter for the troops, but chiefly for the use of the men themselves who were still at work on the gallery. As this opening afforded a good view over the enemy's works and batteries, the idea suggested itself of using it as an embrasure, and a twenty-four-pounder was placed in it. In a short time other similar openings were formed by the side of this one, so that in September four or five guns were placed in the gallery, which in the course of a year was continued to the projection of the Rock, where General Eliott had previously planned to open the battery in the rock which is now known by the name of St. George's Hall. —See Drinkwater, page 217.

own shots sent down from so great a height are too plunging. Moreover the cannon placed here are comparatively of too small a calibre, mostly nine- and twelve-pounders, on depression-carriages; they however command the greater part of the entrance to the town, close to the north-west corner of the rock, called the Land Port, or at least the flat ground before it, together with the previously existing triple lines which extend below at the foot of the Rock and are suitable for mounting heavy guns. This entrance is therefore of great importance, with the narrow dyke in front, because it is the only point against which a formal attack could be directed. The enormous embrasures formed in the rock, from which the guns of the Excavations are pointed, have occasioned many fatal accidents. An English officer was once trying to gather some flowers for a lady, when he was precipitated from one of these openings: at another time a similar fate befell six or eight artillerymen, who were blown through one of them by the bursting of a piece of ordnance.

It was interesting to look down upon the two lines of the English and Spanish posts, which cross the Neutral Ground obliquely,—the black sentry-boxes of the former and the white ones of the latter, with the guard-houses behind, and in the background "The Queen of Spain's Chair." The garrison of Gibraltar frequently exercises on the Neutral Ground between the two lines. At the point where the Spanish line touches the sea, lie the Fort of Santa Barbara on the east side, and that of San Felipe on the west, which the English,

taking advantage of a favourable moment, rased to the ground in the last war with France. Inside the English chain of posts, toward the Land Port, is a garden, with an excellent spring; there are others in the town itself, but generally speaking there is rather a want of water. Foreign men-of-war therefore often fetch water from Algeziras: for instance the French squadron stationed before Tangier does this frequently, and employs the following stratagem to evade the strict Spanish quarantine: they first sail to Gibraltar, which lies opposite, remain there about five minutes in the roadstead, to furnish themselves with papers attesting this, and then sail to Algeziras. Although the Spanish authorities can see perfectly well from their windows how long the French have remained at Gibraltar, yet they grant them permission to land, because in fact they have not come direct from Africa, and the letter of the law is obeyed: there is no difficulty, since the certificates of health are all *en règle!* Close in front of the Gate, on the bay of Algeziras, lies the wharf for merchantmen.

The passage from the north to the west front is formed by a kind of crown-work, which with a demi-bastion and a curtain (the Grand Battery) on the north end of the town constitute the lower connection between the north-west corner of the Rock and the bay. In this curtain is the Land Port, in front of which lies the Inundation. Under the left face of the bastion, on the capital of the crown-work, a short *embarcadère* projects into the bay, and close by lies the Water Port, if I mistake

not, in the other curtain. With the irregular left wing-bastion is connected a second, much larger Mole, called the Old Mole; this is of great width, and runs so far into the bay, that, together with the colossal battery extending *à fleur d'eau* along its north side, it completely commands the entrances to the Land Port, and flanks a landing on the Neutral Ground so effectively that it has acquired the name of the Devil's Tongue. On the open space in the interior of this work are erected bomb-proof barracks.

From this point the fortification of the town follows the level ground. The large King's Bastion, furnished with two stories of quarters, projecting from the centre of the town into the bay, offers sufficient enfilade. To the south a strong entrenchment divides the town from the rest of the peninsula. With the left flank—that of the South Bastion—adjoining the bay, is united on the east a curtain, in which is the South Port: it is continued by a wall up to an inaccessible precipice. In front of this wall is advanced a peculiar *place d'armes*, formed by high walls, in which three breastworks are thrown up transversely, one above another, with gun-platforms, facing the bay. Before this wall, which rises up to the Signal House, is a second, outer wall, known by the name of Charles the Fifth's Wall, and belonging to his time: the inner wall is attributed to the Moors. This strong entrenchment renders a hostile landing on the south side, outside the town, next to impossible. Not far from this spot, and close to the shore, lies the only point at which, for want of being effectively flanked, it

might be possible to effect an entrance into the town, although from the nature of the ground the attempt would be beset with extreme difficulty.

The enormously long, uncovered Saluting Battery joins the town on the south; it is quite as destitute of flank-protection as the other coast-batteries, which extend from this spot round Europa Point, and to the north-east up to the perpendicular rock, where all the defences of course cease. In most parts of the long lines of curtain, a single cannon or at most two are placed behind a corresponding embrasure, as the only side defence.

The English perceive that they have hitherto assigned too little importance to the coast-defences, and are now beginning to strengthen them. Thus it is intended to provide the Saluting Battery with a proper flank, by connecting the point of the Mole at the Ragged Staff, (a small landing-place and quay near the South Bastion, but outside the covered way) obliquely with the land, and converting this space into a battery. Since the experience of the English ships at Acre has shown that a single line of defence is no longer sufficient against a powerful attack, a large new battery is now being erected further back, above the Saluting Battery. It is built *en crémaillère*; the guns also turn on pivots. At several other points similar batteries are in part completed, and partly only projected. The breastworks of the old defences are also to be gradually strengthened, being built too weak and all of masonry. The reason assigned for building stone breastworks is, that the vio-

lent torrents of rain in this climate would wash away the earth; here likewise, as in Malta, there is a want of earth, for the sand of the Neutral Ground has no cohesion or firmness. The battery on Europa Point, which flanks the entrance to the bay, was formerly so low that it could be overlooked by all the ships: it is now entirely rebuilt, and the new works are much higher. In general the English consider forty feet a proper height for a coast-battery; they now build them as high as eighty feet above the level of the sea, since the *ricochet* is quite as good, and they are better covered from the fire of the enemy's ships. This pretty well agrees with Gribeauval's view, who declared forty-eight to ninety-six feet to be the most serviceable height for coast-batteries, in opposition to those who adhered to the low, razing batteries. The author of the French "Aide Memoire," like Smola, bases his views on the principle of laying the coast-batteries so as to be able to employ the rolling-shot fire with the greatest possible advantage, without being exposed to the *ricochet* of the enemy. A cannon-ball ricochets best on the water at an angle of 4° to 5°, especially if the first rebound takes place at 265 paces from the gun. From this is calculated the height of the battery, levelling it by the tangent of the angle of 4° to 5°, which at 265 paces gives forty-four to fifty-six feet. If the ship cannot approach nearer than 530 paces, the most effective height above the sea is from 67 to 120 feet, and so on*.

* Compare, Aide Memoire portatif à l'usage des Officiers d'Artillerie. Strasbourg, 1831, p. 249.—Memoire sur la Défense et

A ship, whose upper tiers of guns are not more than eighteen feet above the water, is obliged to elevate her guns against such a high point so much, that their range is destroyed by the rolling, as much as their side direction is by the pitching; whilst the balls which strike the water are unable to rise to the battery at all. Even supposing the sea to be perfectly calm, the ship has still to contend with this difficulty, that the small size of her ports admits only of a slight elevation, and the directing gunner has a very limited range of sight through this opening*. The general calibre of the gun on the sea-line is that of thirty-two-pounders. On some important points the English intend to place the new fifty-six-pounders, on account of their immense range; yet they seem strangely never to have thought of employing mortars†. Some of the guns in the coast-batteries fire through embrasures, others *en barbet*.

Excellent roads, well kept up, afford a ready means of communication in all directions, where the nature of

l'Armament des Côtes, avec plans et instructions approuvés par Napoléon, etc. Paris, 1837, p. 17.—Handbuch für K. K. Oesterreichische Artillerie-Offiziere, p. 389.—Allgemeines Wörterbuch der Artillerie, etc. von Hoyer. Part ii. p. 71.—A Treatise on Naval Gunnery, etc. by Major-General Sir Howard Douglas, pp. 108 and 232.

* The French 'Exercices et Manœuvres des bouches à feu à bord des Vaisseaux de l'État,' etc. 1833, calculates all its tables of firing only up to 5° elevation.

† With reference to the important use of bombs against ships I refer the reader to 'Exercices du canon de la caronade et de l'obusier en usage à bord de la fregate d'instruction l'Amazone,' etc. 1841, page 47.

the ground permits. There is no want of bomb-proof shelter, and under this head may be mentioned the barracks, in the crown-work, and the wide extent of the Excavations, which can easily be converted to such a use. The Victualling Depôt and the Lazaretto are very remarkable. Another important circumstance is, that there are barracks placed on the principal points of the peninsula: thus there is one on Windmill Hill, which with the Almeida form two important points for assembling the garrison. Whether these barracks and the other military establishments are bomb-proof, I cannot say. The inconsiderable Royal Dockyard lies outside the town on the New Mole, not far from Europa Point. Within this Mole the largest men-of-war can anchor, but this marine establishment possesses no means for any considerable refitting works.

It may be well to introduce here a brief sketch of the siege of Gibraltar during the American War.

Gibraltar had already been blockaded from the sea, since the 16th of July, 1779, when the Spanish Lieutenant-General Martin Alvarez de Sota Mayor began in the following month to repair the lines on the isthmus, distant nearly two thousand yards from the Fortress, as well as the Forts Santa Barbara and San Felipe on their flanks. At this time the whole garrison consisted of 5382 men*, whilst the Spanish camp in the beginning of October comprised sixteen battalions and

* In March, 1783, the Fortress numbered 521 cannons, viz. 77 thirty-two-pounders, 149 twenty-four and twenty-six-pounders, 113 eighteen-pounders, etc., with 32 howitzers and 110 mortars; making a total of 663 pieces of artillery.

twelve squadrons, altogether about fourteen thousand men. On the 12th of September the English Governor Eliott opened a fire on the enemy's works. It was however soon perceived that the heavy shells sunk too deep into the sand of the Neutral Ground to be able to do any important damage, and on the proposal of Captain Mercier it was agreed to fire five-and-a-half-inch grenades from twenty-four-pounders, which answered very well. Months passed ere the Spaniards had completed the batteries in their lines, so that the 19th of January, 1780, arrived before they unmasked the first, while the rest were not ready for service until the 21st.* They lay altogether in the western half of the lines, between the centre of the latter and Fort San Felipe. The number of guns on them amounted on the 25th to more than one hundred, including forty mortars in seven or eight mortar-batteries. About this time Admiral Rodney's fleet arrived, and brought the garrison, who for months had been suffering the greatest privations, the most urgent necessaries of life, with a reinforcement of troops. Scarcely had the Admiral again left the Mediterranean, when the Spanish blockade was renewed with its usual severity. After an unsuccessful attempt to burn those English vessels which had remained behind at the New Mole, by means of fire-

* The first shots from the side of the besiegers were fired on the 10th of January from the Fort Santa Barbara at an English funeral procession in the cemetery close under the most northern projection of the Rock. On the 11th, Fort San Felipe fired some shots at the town, without any great effect.

ships, the Spaniards devised a fresh means of annoying the fortress. On the 27th of June they made the first attempt to fire upon the town with gun- and mortar-boats, and repeated this attack, which proved very effectual, almost uninterruptedly during the whole of the siege*. On the land-side they were on the contrary less active, for it was not until October that they advanced beyond their lines with new works of attack, 600 to 700 yards along the bay, in order to establish there new batteries at a distance of 1100 yards from the Land Port. The appearance of the fleet under Admiral Darby, on the 12th of April, 1781, was followed by a general bombardment from the fortress on the land-side, with 114 pieces of heavy ordnance (about fifty thirteen-inch mortars, and the rest twenty-six-pounders), which for a short time put an end to the Spanish blockade. Another important event in this year was the sally which General Eliott made on the 27th of November, to destroy the enemy's works and spike their guns, which was completely successful, and unattended by any great loss. This was an important result, considering that the enemy did not succeed in repairing

* In June, 1781, a battery of one thirteen-inch mortar, five thirty-two-pounders, and one eighteen-pounder, was established at the head of the Old Mole, both to keep the gun-boats at a distance, and also to sustain a fire upon the distant camps of the enemy. The mortar contained a charge of twenty-eight to thirty pounds of powder; the cannon were laid at an angle of 42° with the platform trenched into the sand, and held fast in this place by props, beams, etc. The thirty-two-pounders were charged with fourteen pounds of powder, and the eighteen-pounders with nine. (See Drinkwater, p. 167.)

the destroyed batteries until March, 1782, four months afterwards.

A new era in the siege began with the summer of 1782, when the Duc de Crillon, in the end of June, assumed the command of the combined Spanish and French army, the strength of which, beside the cavalry, was estimated at forty-five (including eight French) battalions of infantry, two Spanish battalions of artillery, and four French companies of artillery. The command of the sea force was given to Admiral Moreno. In addition to this officer and the French engineer Monsieur d'Arçon, who was attached to the Duke, and soon became the very soul of the whole siege, two French princes, the Comte d'Artois and the Duc de Bourbon, joined the army, with a view to be present at the taking of Gibraltar, which was now confidently expected. The Duc de Crillon set to work in earnest; in the night of the 15-16th of August, he caused the former works of assault to be continued to the Mediterranean by a large parallel of five hundred yards, and united this by a communication thirteen hundred yards long with the lines at the back. The eastern half of these trenches was converted into a colossal battery for sixty-four cannon. The space up to the old part of the parallel was occupied by mortar-batteries.

These formidable preparations of the enemy had been long and quietly observed from the fortress, when at length on the 5th of September, on the proposal of the Lieutenant-Governor General Boyne, a heavy fire of red-hot balls was directed against them. The first employ-

ment of red-hot balls in great quantities was crowned with the best results. Notwithstanding, the enemy on the following day answered with a fire from one hundred and seventy pieces of artillery (including sixty mortars) from the Neutral Ground; whilst a squadron of nine ships of the line, in connexion with a great number of gun- and mortar-boats, attacked the west front.

Upon the arrival of the large combined fleet in the bay of Algeziras, on the twelfth of September, they began to put in operation D'Arçon's chief plan of assault. By his advice preparations had been made since the month of May, to convert ten large ships (the 'Pastora,' afterwards Moreno's flagship, was even a two-decker) into floating batteries, and they believed that these were completely shot-proof. The attack by sea on the thirteenth, which was vigorously supported by all the batteries of the isthmus, proved their mistake: Gibraltar remained unshaken, and the floating batteries were burnt. The red-hot balls and Eliott's firmness saved the fortress. Although the enemy directed new operations against the Land Port in October, his power had since the thirteenth of September been crippled, and there was no longer any spirit in the siege. Lord Howe arrived about this time with an English fleet, bringing reinforcements of troops, ammunition, and food to the besieged garrison.

The enemy now saw clearly, that they could no longer reckon upon taking the fortress by a regular assault, and resorted to the chimerical plan of blowing up the north

front of the Rock. A mine was in consequence driven into the rock near the Devil's Tower, but was hardly completed, when the Peace of Versailles put an end to the siege, after a continuance of three years, seven months, and twelve days: on the second of February, 1783, hostilities ceased. The English had in this time fired 205,328 shot and shells; the Spaniards, 258,387. The English loss amounted, in killed and wounded, to 471 men, but this number was increased by sickness and desertion to 1231. Fifty-three guns in the fortress had been disabled, whilst it is said that the Spaniards had three times renewed their artillery.

On quitting the Signal House, we rode down the mountain and under its ridge. I relinquished a visit to St. Michael's Cave, as my time was short, and it can only be seen with a very troublesome illumination: an old tradition said that there was a subterranean passage between this cave and Africa, through which the apes came over from that quarter of the globe. As I was riding on before, upon Sir Alexander's black Spanish pony, I suddenly heard a shrill tone, quite new to my ears; and on looking up, I saw four light-brown apes run shrieking up the hill,—one of them carrying a young one on its back.

After breakfasting with Colonel Brown, I went to see the first discharge from the eleven-foot new fifty-six-pounder without chamber, four of which guns only had arrived in Gibraltar; their number however was to be considerably increased. I previously witnessed the exercise of the ten thirty-two-pounders in the battery at the

Ragged Staff. They fired at first with solid shot, and then with spherical case-shot, at a flag fixed over a floating cask. The fuses burned very regularly. The height was said to be forty feet, and the interval one hundred: both were kept very exactly. One case-shot missed fire, and one went out in the barrel. The firing lasted about ten to fifteen minutes; the balls scattered admirably, and both direction and distance were good: they every time cut the wooden fuse according to the distance; in the field, various coloured ones are used for the different distances. The immense, heavy fifty-six-pounder rested on a kind of frame-carriage, which moved round on a pivot, and, on account of its length, upon two traversing circles. At the side of the breach is an arrangement, by which the degrees are marked, and at the side of the muzzle an incision corresponding with it. On one side of the carriage is fixed a wooden index, which gives the elevation necessary for any particular range. It was incorrectly fitted, and seemed moreover to be very unsteady. The range of this gun is said to be seven thousand yards, according to accounts from England. With the highest elevation (about 25°) which could be attained at this first trial, coincided the greatest range, computed at five thousand yards, the time of flight being twenty-five seconds from the flash to the last rebound of the shot. The carriages in Gibraltar are mostly of iron; but in case of war Colonel Brown intends to substitute wooden ones, of which he possesses the necessary store; as the iron ones are soon destroyed by the discharges, although they resist the weather better upon the ramparts. The

number of guns at Gibraltar he stated to be 650 to 660.

From the artillery practice, I went with the Governor to the barracks of the Seventy-ninth regiment of infantry, the Cameron Highlanders, whose apartments, like those in the barracks of the marine infantry at Naples, are fitted for the reception of a considerable body of men. Admirable order was observed throughout: to economize room, the iron bedsteads are made to turn up, so that the foot lies on the head. The Scotch appear to me burdened with much unnecessary baggage, and their plaids sown in tight folds seem quite useless: the pouch which they wear in front supplies the place of pockets. In the barracks we found a prettily arranged theatre for the garrison, and an extremely elegant mess-room for the officers.

Before going to dinner at the Governor's residence, I returned to the roadstead, and visited Captain Pring on board the 'Thunderer.' After dinner I saw the Fifth Regiment exercise on the Almeida. This regiment is distinguished by its fine-looking men, with good carriage, calm deportment, and great regularity, precision and good aim in the use of their arms. The march, 108 paces of 30 inches in a minute, was very free. The English form whole companies into fusileers: some signals, such as to spread, to charge, etc., are the same as with us; the new regulations also appear to be in part formed after ours. The garrison of Gibraltar consists of the First Regiment of infantry, called "the Royals," with blue facings,—the Fifth Regiment of infantry, "the

Northumberland Fusileers," with green,—the Seventh, "the Royal Fusileers," with blue,—the Forty-eighth, with yellow,—and the Seventy-ninth Regiment, "the Cameron Highlanders," with green facings. In addition to this force there are four companies of artillery, and two of sappers and miners.

A short ride with Sir Alexander Woodford concluded the day. I have not seen any English horses here; the officers mostly ride Spanish ponies or small Barbary horses.

July 15th.—From the Rock of Gibraltar, from its sunburnt, barren coasts, and from the deck of the 'San Michele,' our glance wandered continually to the coast of Africa, veiled in light semi-transparent mists. How I longed to lift the veil, and set foot on that quarter of the globe which had been for days in view! I had looked forward to this visit to the land of the Moors, which my imagination pictured in the most splendid colours, as one of the bright spots of my travels; and I now awaited impatiently the moment when, upon the shore of Africa and on its furthest limits, I should again greet the East, like an old friend. Yet it was no easy thing to accomplish such a design: we had much to consider and to plan.

It was agreed that we should first direct our course to Tangier, the principal port of Morocco, and thence proceed on horseback across the country to Tetuan, which was practicable with an escort. Tetuan was represented to me as a place which gave the best idea of a Moorish town; and the Governor of Gibraltar, who

some time before had visited his Morocco colleague there, politely offered to give me the best introductions. He described the commander of Tetuan as a friendly person, who had received him with great hospitality, and given a splendid Jerid exhibition of the cavalry in honour of his visit. From Tetuan it was proposed that we should sail to Ceuta, where the Arab and Spanish outposts stand opposite each other.

Attractive as was this plan, it would have occupied, under the most fortunate circumstances, at least three days; but in that time the wind might probably shift round from the east, which was in our favour, to the west, and the Frigate in that case be detained at Gibraltar from eight days to a fortnight,—a risk which I did not feel it right to incur. But there was also the difficulty that we had no means of crossing the Straits. The 'Lizard,' the only British cruiser, was just then absent; and the Spanish sailors of the coasting-vessels raised difficulties on account of the quarantine to which they should be exposed in the Andalusian harbours on their return. While this subject was being canvassed, an opportunity presented itself most unexpectedly; Captain Ponsonby, of the "Seventh Foot," invited me, through the friendly mediation of Captain Morittes, an aide-de-camp of the Governor who knew of our difficulty, to a pleasure excursion to Ceuta in his yacht. It may be imagined how thankfully this kind offer was accepted, and all difficulties being now removed this day was fixed for the excursion.

At ten o'clock in the forenoon I saw Mr. Ponsonby's

cutter sail out of the royal dock, and vainly attempt to approach the Frigate: she appeared spell-bound under the shadow of the Rock of Gibraltar, where alternate squalls and calms kept her stationary. I therefore desired a boat to be manned, which carried us quickly to the 'Hornet.' We went on board the cutter, which, while waiting for her owner, was every instant rudely laid on her side by the violent gusts of wind.

As soon as Captain Ponsonby, with a party of friends, arrived, we steered first across the bay, describing a large circle toward Algeziras, and then straight away to the castellated mountain of Ceuta. On the right the view extended to the Straits, in which the lighthouse of Tarifa*, the most southern point of Europe, rose like an island; whilst on the left, behind us, the Rock of Gibraltar assumed by degrees more and more the form of a pyramid. The strongest line of the influx of the ocean, which is easily discerned by the increased smoothness of the water, was soon passed. Long, dark blue waves began to toss the cutter about in a disagreeable manner, though we had not yet taken in a single reef in the mainsail. The mountains of Africa, which are all wooded, passed from a light blue to a dark green tint, and the rocks on them stood out more clearly; while the picturesque chain of the cloud-capped Apes' Hill, above

* The light of Tarifa is a revolving one, which at regular intervals vanishes from sight, and then re-appears. We have many such on our coast. There is no doubt that the dangers of the rock of Scylla would be much lessened, if a revolving light were placed there; for the present Faro light is indistinguishable from those on the Calabrian coast.

two thousand feet high*, the Djebel Zatoot of the Arabs (Mons Abyla of the ancients), was distinguished by its beautiful outline. The apparent island of Ceuta gradually became a peninsula, as the hilly ridge which connects it with the spurs of Apes' Hill came in sight. Upon this ridge we perceived numerous black and white points,—invariably standing in pairs, close together; and through a telescope we soon observed that these were the huts of the Spanish and Moorish posts, planted opposite to one another. Close to the coast, behind the right wing of the Spanish line, was a stable destined for a picket. At the back of the Arab posts, on the contrary, we observed the ruins of an old wall with towers.

For centuries a semi-warlike state of things has existed here, which threatens on any trifling occasion to break out into open strife. The Moorish inhabitants of this coast are known as the wildest and most hostile of their race; no boat's crew dares to land in their territory. Even the English, fond as they are of sporting, are obliged to forgo the amusement of hunting the wild-boars, which abound in the forests of Apes' Hill; for the Moors fire upon every European who approaches their territory. A short time ago, a hunting-party from Gibraltar resolved to brave these dangers, and, quitting the yacht in which they had crossed the Straits, got into a boat and rowed up a secluded creek. Here however they met with such a warm reception from the guns of some Arabs who were lying in ambush, that they thought

* Major von Cler, of the Prussian General-staff, states its height, according to his measurement, to be 2200 feet.

themselves fortunate to regain their cutter without any serious accident.

The inhospitableness of this coast was an additional reason for our at once relinquishing the idea of proceeding to Tetuan, although so near. The land-journey thither from Ceuta is considered impracticable, as the influence of the peaceable Governor of Tetuan does not extend to the intermediate territory. Tetuan being the only approachable point where a landing can be effected, and there being no anchorage between the two towns, the owner of the 'Hornet' did not venture, with the prevailing east wind, to coast along the shore.

Let us now return to Ceuta, to which we were so near that the hill crowned by the fortress seemed almost to encompass us. Between this hill,—projecting into the sea, and rising from three to four hundred feet high,—and the spurs of Apes' Hill, a series of seven or eight small cones gradually came in sight, united at their base: upon these rises the snow-white, real Spanish Ceuta, enclosing a wide sweeping bay, with almost the stateliness of a large town.

The parched heights which separate Christendom and Islamism adjoin the seven hills of the town, forming a link between it and the loftier and darker mountains on the right. The towers scarcely appear at all on this ground, and the red Lazaretto or hospital of Ceuta, with its pointed gable, forms the most striking object among the buildings. The hills above the town are in part covered with shady woods, while in other parts rows of tall aloes extend along their summit. In the place itself

we found two palm-trees, after looking about for a long time. There is at all events plenty of life at Ceuta, for behind the low walls on the quay, many hundred chained galley-slaves were seen moving about, divided into several gangs; they certainly seemed to constitute the greater part of the population. After a voyage of two hours and a quarter our swift-sailing 'Hornet' anchored in the roadstead, by the side of the small cutter 'Aline,' in which Captain Morrites with Mrs. Paget had preceded us.

Captain Morrites and Count Ornilla landed immediately on our arrival, to make all needful preparations. Meanwhile a general 'luncheon' was served in the pretty and comfortable cabin of the 'Hornet,' which entirely removed all the disagreeable effects of the voyage. After breakfast the little boat was manned, a party of five or six persons pressed into it, and I steered to a kind of bridge, close to which we intended to land.

Scarcely had we set foot on the soil of Africa, when we joyfully hastened to the Alameda close by. From this little promenade, lined as usual with trees, we had a view of Cape Negro, lying on the bay beyond Ceuta, in the direction of Tetuan. We then descended to a small square, in which was stationed a Spanish artillery-officer, a perfect picture of misery. A number of chasseur horses stood ready saddled, which may be hired at a cheap rate, like the donkeys at Ems: for a trifle we [illegible]ged some for our excursion. Our military leader [illegible] dress in a worn-out, dark blue uniform, with a [illegible] round felt hat on his head, and a switch in his

hand, which supplied the place of any other weapon. Following our leader, we proceeded, one minute at a foot-pace, the next at a jog-trot, on the heavy cavalry horses through the town to the outposts.

The streets in Ceuta, like many of the towns in Holland, are paved with very small stones, in various arabesque figures or flowers: the clean appearance of this pavement at once caught the eye of our English companions. Ceuta lies on a tongue of land, stretching from east to west, and forming a large bend toward the south. The narrow land-front, consisting of two or three lines of badly flanked works, one behind another, has a strong profile and a wet ditch, which converts Ceuta into an island*. We consequently did not properly set foot upon the continent of Africa, until after we had safely stumbled over the ricketty drawbridge with our clumsy horses.

Directly before the land-front rises the parched and commanding height on which the Spanish vedettes extend, dividing the tongue of land at its root. The stable, which we had observed from the sea, remained on the right of our road, in a hollow not far from the shore of the northern bay. The chasseur picket was in a kind of semi-bivouac, only a part of the horses being stabled; the rest stood outside ready saddled. The picket

* Ceuta was taken in the year 1415 by João I. of Portugal, on which occasion his sons, especially Don Henrique Navegador, distinguished themselves greatly. Subsequently, in 1570, it fell, with Portugal, to Philip II. of Spain. In the revolution, and at the conclusion of the peace in 1668, it remained in the possession of this monarchy.

has three posts in front of it, opposite to which stand a corresponding number of Moorish ones.

We turned to the left, and galloped up the height to the central vedette. The chasseur—for the Spanish posts are single, not like the Arab ones in pairs—was dismounted, and standing before the covered water-trough of his horse. At about twenty paces opposite to him was the tent-like cabin of the Moors. This is the best proof of the good understanding which exists between the two parties, and which is mainly ascribed to the friendly conduct of the present Governor of Ceuta; a few years ago, it is said, the outposts were much more on the alert.

At the door of the hut stood an unarmed, haggard-looking Arab, with bare head, and wrapt in a large woollen cloak with black and white stripes and sleeves: he had jet-black eyes, and black but not very bushy whiskers. On the ground in front of the cabin lay a heap of something which looked like a sack, with a conical top: it was not till after some minutes, on a closer examination, that I discovered under the pointed hood the face of an old man, buried in a white beard, whilst a white burnu covered the rest of his figure. I began to sketch, which seemed to excite the curiosity of the younger Moor; and taking advantage of this circumstance I approached him: he looked at the drawing, and we endeavoured, as well as we could, to come to a mutual understanding in scraps of Turkish, Spanish, Italian, etc. On my asking him how he liked the sketch, he replied like a good Mussulman in a straight-

forward manner with a laconic "No,"—it contained figures of men; but thinking this not enough, he added in good Turkish a significant "Jock."

Encouraged by his frankness, I went with him into the hut. The hole through which we had to creep was low, and the hut was small, but very clean, cool and shady. Some finely platted straw mats, of a long, oval shape, upon which the Arabs lie, and a few trencher-shaped mats which serve as pillows, lay on the ground: there were also several broad shelves of cork, the use of which I could not understand. In the further corner stood the Turkish firearms, and close to them lay rolled up on the floor two little black puppies. The Arab was amused to see me playing with them, and the expression "Kütschück," which I used, sufficed to explain to him why I was so pleased with them. A lute lay on the ground, nearly within reach of the little dogs. Several earthenware vessels also stood about, one of them filled with milk. Beside the muskets, I discovered an old English sabre, with a black leather scabbard, and "George Rex" upon the hilt, which amused the Englishmen of our party greatly. It is so usual to picture to oneself the Arab as inseparable from his faithful charger, that we were naturally struck by observing that the Moorish posts had no horses: they seemed to belong to the irregular infantry.

The huts of the Moors, and the attitude and position maintained by their adversaries, alike led us to infer the permanence of these outposts; they have at all events remained unchanged from time immemorial.

The Spaniard's horse stood under a shed, formed of a narrow roof of wood, with straw mats hanging down to the ground on the sides; a wooden sentry-box is provided for the man himself, in front of the covered water-trough.

The view from the Spanish post was very picturesque and peculiar:—in the foreground the Arab hut, with its strange-looking inhabitants; behind, at the foot of the rising ground, the ruins of the above-mentioned old walls with their dilapidated towers; in the distance the dark, bluish-green chain of Apes' Hill, stretching on the right into the sea, and on its side a lonely Moorish village.

From this central vedette we galloped to the Spanish post of the left wing, close above the southern bay in the direction of Tetuan. The view from this point is very similar to that just described. The little village on the mountain lay straight before us, Cape Negro projecting into the Mediterranean on the left. The Moorish hut, in every respect similar to the former, stood in like manner here only twenty paces distant from the Spanish chasseur. These tent-like cabins are thatched with the fans of the same dwarf-palm as is found so plentifully at Girgenti and Selinunte. Here I discovered the purpose of the broad shelves of cork,—two Arabs were seated upon them in front of the hut: each wore a white burnu, and the elder, a thin grey-headed old man with a white beard, had drawn the hood over his head; the other had twisted a white turban round it. The old man endeavoured by signs to find out whether I had a

small knife about me. I pulled out my penknife, and showed him how I used to cut the leaves out of my sketch-book. He expressed a wish to have it, and I gave it him; whereupon he bared his left arm, to make me understand how useful the instrument was for letting blood. Presently I missed my knife,—the old man had retained it: to him this was quite natural,—he thought it pretty, and anything that a Turk praises he wishes to possess; so delicate and at the same time so significant a request a polite Mussulman can never refuse,—it is the custom of the race. I first learned this fact in Gitomir, on the road to Wosnessensk, where I met several hundred Kurdish horsemen, who were on their way from the Caucasus to Warsaw, to relieve a Turkish regiment. The officer in command arranged a Jerid performance in one of the squares of the town, in honour of Prince August of Prussia and myself. A handsome bay horse struck me especially amongst the numerous Persian and Tscherkessian chargers; and with the innocent wish to say something civil to its master, I praised the beauty and agility of the animal; but the officer no sooner perceived my admiration of his horse, than he instantly dismounted, and leading him by the bridle presented him to me. I was not prepared for this offer, and politely disclaimed any such idea, adding that I could not think of depriving him of his horse, and so forth. At this he began to take the matter seriously, and to feel himself excessively offended; nor was it until after a long explanation that he could be induced to retract his kind and well-meant offer. The

Sultan Machmud was clever enough at taking advantage of this national custom: one day he went up the hill of Candeli, extolled the view, and the kiosk,—and from that moment it all became imperial property! Thus at almost every spot which commands a fine view of the Bosphorus, and offers temptation for a residence, may be seen—the fruit of similar Grand-Seignorial praises—a summer-house transferred to the imperial possessions!

The praise of anything therefore expresses at the same time a wish to possess it, and it is impossible ever to decline accepting an offered present. The old Arab had, in his fashion, politely asked me for my penknife, —accompanying the request with a suggestion that, in giving it to him, I should assist in relieving suffering humanity. I had given it to him, and considering me a man of the world, he naturally felt obliged to accept the present. I did the old man great injustice therefore, in fancying that I could trace a certain craftiness in his features, and thinking him even capable of theft. But so entirely had I forgotten the manners of the East, that I actually asked for my knife back. The old man might perhaps, strangely enough, have suspected from my manner that his oriental title would not be so readily recognized by an European, for he had wisely stowed away in time the *corpus delicti*, and now pretended to assist me in finding it!—it may easily be imagined that it was not forthcoming.

As there appeared to be such an absence of vigilance in the advanced Moorish posts,—the arms standing peacefully stowed away in a corner of the hut,—we determined

to see whether the Arabs would allow us to pass a few steps into the Morocco territory. A flock was feeding just beyond the line, and we rode toward it; but no sooner did the shepherd perceive our motions, than he advanced from behind a hillock with his gun at his back, while the Moorish soldiers seized their arms, and followed our cavalcade with their eyes. Having thus convinced ourselves by experience of the difficulty of penetrating into the interior of Africa, we rode back to Ceuta, and went on board the yacht, which directly weighed anchor.

The breeze was at first light, but freshened by degrees, and soon filled the sails of the two graceful cutters, which danced lightly upon the long rolling waves. The dark cloud still lay upon the rocky pyramid of Gibraltar,—a sure sign of the prevalence or approach of the east-wind. At the foot of the Rock, the beacon-light on Europa Point was visible,—the beaming memorial of Queen Adelaide, which guides the sailor safely through the Pillars of Hercules. Gradually the moon rose, and the waters of the Straits gleamed like a silver band on the waves of that arm of the sea, which, whilst it separates two quarters of the globe, forms the azure bridge from one sea to the other,—the path of commerce, navigation and wealth, which boldly stretches over from the old and narrow world of the Mediterranean, once bounded by the Pillars of Hercules, to the wide expanse of ocean, whose distant coasts allured the dauntless mariner on and on, until he discovered an unknown world, and found ever-new lands, which exchanged the rich products of their soil for the

treasures of the Old World, Europe's culture and civilization, and which still offer an extending field to the enterprising spirit of their inhabitants and the spread of human knowledge. A voyage of about two to three hours brought us back from Ceuta on board the 'San Michele.' Thus ended our trip to Africa!

In order not to lose the favourable east-wind, I the same evening took leave of the Governor of Gibraltar and his amiable family. As I entered the room, Lady Woodford was singing some Spanish songs with her children. Crossing a narrow drawbridge at the Ragged Staff, I passed out of the fortress, and in a glorious moonlight the boat, with a few sturdy strokes of the oar, carried me quickly on board.

July 16th.—As early as two o'clock this morning the capstan was set in motion on board the 'San Michele,' to the roll of the drum. The dark shades of night still brooded over the bay of Algeziras*. Morning twilight

* The bay of Algeziras is famous for its quantity of fish, although this had struck us much more still further eastwards. On the first of July especially a number of whales had engrossed our attention near the mountains of Adra. Here a strange scene presented itself. From time to time dark-blue furrows opened in the silver-grey surface of the sea, and there rose up the backs and fins of large, black fishes, rolling about, and every now and then spouting water from their nostrils; they were a small species of whale, called by the French "Souffleurs," (grampuses). In the second cutter a party went out to pursue the whales, and fired among them; this however seemed only to give the fish a momentary annoyance, but they went away. At nightfall three or four "Souffleurs" swam up to the ship and rubbed themselves against her side, which seems to be the chief amusement of these fishes; they made a continual snorting noise, but I myself did not hear it: they were distinguishable by the white light which they caused in the sea.

came on, ere the last anchor was apeak, for we lay, as already mentioned, in nineteen and a half fathoms, and outside the northern of the two anchorages laid down by the English Admiralty charts. On this north anchorage, the head of the Old Mole is E.S.E. $\frac{3}{4}$ S., at eight and one-fifth cable-lengths' (2050 paces*) distance, and the Spanish fort of San Felipe at the same distance N.E. $\frac{3}{4}$ E., with about nine fathoms' depth of water. The south anchorage has eight to ten fathoms, the head of the New Mole is three and three-quarters cable-lengths (about 950 paces) S.E., and the Ragged Staff the same distance E.N.E. $\frac{1}{2}$ N.

The bottom of the sea in the roadstead contains many dangerous and rocky places, and is by no means adapted throughout for anchorage. Along the whole line from the "Dock" to the Old Mole, forming as it were a protection against any landing or approach of large men-of-war, extends a bank, or more properly a reef of rocks, which commences just at the point where the protecting steep coast terminates, and is continued on the north like a connecting sandbank around the whole Bay. For this reason we find the depth of four and a half to five fathoms (the least into which a ship of the line can venture,) only at a considerable distance from the works, and about 2200 paces west from Bay-side-Barrier, lying at the end of the Dam in front of the Land Port, about 1200 paces from the head of the Old Mole, and 1050 from King's Bastion. On the west, in front of the northern half of the long curtain

* A *pace* is equal to two feet and two-fifths.

between the King's and South Bastions lies a three-fathom bank at a distance of about nine hundred paces, within which is a narrow passage, impassable for ships of the line: these are therefore obliged to remain outside the bank, at about 1300 paces from the land. Opposite the Ragged Staff, on the contrary, at 450 paces there is a depth of four and a half fathoms; and near Jumper's Bastion, at 600 paces, five and a half fathoms; whilst ships of the line can lay-to along the New Mole and run into Rosia Bay, to take in stores of provisions from the magazines there.

In the above statements I have of course mentioned the extreme limit of the depths at four and a half to five fathoms; but I am by no means of opinion that a hostile fleet, desiring to honour the fortress with a sharp iron greeting, could, even with the most favourable wind and tide, sail close to this line of limit. Any change of circumstance, a difficulty in recognizing the landmarks amid the smoke of the guns, in fact the slightest accident of any kind, might easily prove fatal. An enemy's fleet would therefore remain some hundred paces outside of this line, if it only sailed past; if it wished to anchor, the room for swinging the ships must be taken into calculation. Moreover it should be remembered, that the three-fathom bank I have before mentioned, together with the rocks lying a cable and a half's length to the west of it, would easily separate any large fleet, if the ships should not succeed in casting anchor within the narrow space between these two insecure spots, without approaching too near to the shallows. It was perhaps

with a view to avoid these difficulties that the famous attack of the ten "battering ships," under Admiral Moreno, September 13th, 1782, was confined to that part of the town-front between the King's and Montague Bastions. These "battering ships" were men-of-war, converted into floating batteries, the largest measuring 1400 tons. Instead of making a breach in this front, as the Spaniards had intended, the project was frustrated, and all the ships, in spite of their protection which was considered impenetrable, fell a prey to the flames. The thirteenth of September was a day rendered memorable by the service of the red-hot balls, but not less signalized by the generosity exhibited by the British sailors, who, at the risk of their own lives, came to the rescue of their unhappy foes, and carried off the living and mutilated from a death in the flames. Moreno had anchored in line of battle at a distance of 1350 to 1800 paces from the works, consequently in four and a half to fifteen fathoms; and on a close examination of a map, in reference to the above-mentioned particulars, the distance of 1350 paces (five and a half cable-lengths) from the works appears to be the least at which a fleet would be able to lay alongside the fortress,—a distance at which the thirty-two-pounders of the ships of the line (for only ships of the line can be taken into calculation in a sea-attack on Gibraltar), together with some sixty-eight- or eighty-pound bombs, may tell with excellent effect. Perhaps the time is not far distant, when ships of the line and frigates may carry still heavier metal, especially guns of

sixty-eight-pound calibre: hence the efforts of the English to strengthen the sea-line of Gibraltar by a new series of batteries.

The open roadstead of Gibraltar, situated on the east side of the Bay of Algeziras, which at its entrance is four nautical miles wide*, and runs inland six nautical miles, affords little shelter against the violent storms from the east and west, which sweep through the Straits with great fury in autumn, winter and spring. It is therefore often deemed advisable to seize the first opportunity that offers to sail before the coming on of such storms, and to gain the middle of the Straits, where wind or tide carries the ships out into the open sea. Smaller vessels find shelter behind the Old Mole; but those which are unable to do so are frequently wrecked on the well-known Punta Mala. These storms have also proved disastrous to many a large ship, and not long ago an American frigate lost all her three masts in this roadstead. During the siege, in 1780, a violent storm from the south-west put the fleet under Sir George Brydges Rodney, anchored opposite Rosia Bay, into the greatest peril. Two years later, in the autumn of 1782, one of the forty-seven ships of the line of the combined Spanish and French fleet, at anchor in the furthest corner of the bay, between Orange Grove and the roadstead of Algeziras, was cast on shore by a violent hurricane, under the guns of the fortress. During a storm from the south-east, in November, 1796, the English

* A nautical mile is equal to a minute of the equatorial scale, or a fourth of a German geographical mile.

seventy-four-gun ship 'Courageux,' dragged her anchors in the roadstead, and they did not take the ground again till close to the Spanish batteries: the ship could not however remain there, and she therefore stood across to Africa under close-reefed topsails, not venturing out to the ocean for other reasons: that same evening in the dark she was lost against the rocks at the foot of Apes' Hill.

The south coast of the Straits is for the most part very dangerous, especially as the roadsteads of Tangier and Ceuta afford no safe places of refuge. Two ships in company with the 'Courageux' were the same day in the greatest peril. The 'Culloden' of seventy-four guns drove before her anchors, set sail, and narrowly escaped the dangers of the Perla, the well-known reef to the south of Cape Carnero. The 'Gibraltar,' of eighty guns, fearing the frightful hurricane which followed the storm in the evening, slipped her cables, set sail, and ran along the bank of Cape Carnero, or Cabrita Point as it is called by the English. A rock ran into the keel of the ship, was wedged in fast, broke off, and the 'Gibraltar' continued her course without further accident.

It was broad day when we got under weigh, and stood across toward the white Algeziras and Cape Carnero; for during the continuance of the east-wind this is the best course, to escape the squalls from the Rock. The first rays of the morning sun fell upon the cheerful little town and the Spanish brig of war at Isla Verde. This was the spot where the brave Admiral Linois, under

shelter of the coast-batteries, which on both sides joined his squadron by gun-boats, defied a superior force of the enemy; and—a rare occurrence indeed—the English were on this occasion repulsed with the loss of a ship of the line. Sailing round Cape Carnero and the Perla, and steering along the Spanish coast, in order to avoid the force of the current, we now directed our course seaward, where all at once the wind almost entirely subsided.

The current in the Straits of Gibraltar, this continual influx of the ocean waters into the Mediterranean, is well known to be a branch of the North-African stream, which in turn may be considered the termination as it were of the great Atlantic circle of currents,—the grand movement of waters which, coming from the Indian Ocean, overflows the Agulhas Bank, and enters the Atlantic under the name of the Cape Stream; then turns northward along the African coast, disappears for a time, and afterwards re-appears under the Tropics in the violent Æquatorial current, which, passing Cape Roque and the mouths of the Amazon and Orinoco, pours its warm tide through the Caribbean Sea into the Gulf of Mexico; from thence this mass of waters passes through the Straits of Bahama as the Gulf-stream, shoots like an arrow along the United States toward the southern edge of the bank of Newfoundland, and then empties itself like a horn of plenty in the direction of the Azores. It will also be remembered that we find, to the north and east of the Gulf-stream, as a continuation of the general eastern oceanic movement, the Arctic,

the North-Atlantic current and the whirlpool of Rennell, —that remarkable, refluent stream which passes through the Bay of Biscay, and then flows back in a north-east direction toward the Irish coast.

In the south-east corner of this general movement of the North-Atlantic Ocean, in 45° north latitude, which unites with the cold waters of the Polar Sea on its way to warmer regions, and is also joined at times by the overflowing waters of the Gulf-stream, arises that immense accumulation of waters from which the North-African current issues. Commencing between the meridian of the Azores and the coast of Portugal, it runs in a southern direction along the coast of Africa, until it terminates under the name of the Guinea Stream in the *cul-de-sac* of the Gulf of Benin and the Bay of Biafra, the terminus of the general oceanic movement.

A part of the waters of this southern stream is diverted in passing by the Straits of Gibraltar, and turns into the Mediterranean, supplying the water which is lost by evaporation, and uniting with the salt which is left behind in that process. According to Rennell, this course of the oceanic waters toward the Mediterranean begins at about 130 nautical miles west of the coasts of Europe and Africa, between 30° and 40° north latitude. At Cape St. Vincent it is said to be so strong, that a fresh and favourable wind is required to sail round the point. In the Straits its velocity, according to Spix and Martius, amounts to from 4 to 5, and according to Captain Smyth, R.N. to 2·4 up to 4·5 knots an hour. Many a good ship has been turned from her course by

this stream at Tarifa, where its force is the greatest, when the wind had not sufficient power to carry her through the Straits.

In the Mediterranean the current extends towards Cape de Gata*, and its influence is even very perceptibly felt in the roadstead of Malaga, a fact of which I convinced myself.

By the junction of the salt waters of the ocean with the salt which is left in the Mediterranean by evaporation, there would be too great an accumulation of salt in this inland sea, were such a result not provided against by a regular efflux. This discharge, which equalizes the balance between the greater specific gravity of the Mediterranean (1·03384) and the lesser gravity of the ocean (1·02944), seems to be cons ant, and to pass through the Straits in an under counter-current. In confirmation of this opinion, Drinkwater, in his History of the Siege of Gibraltar, adduces the oft-told story, that the wreck of a Dutch vessel sunk by a privateer off Tarifa, rose again at a later period in the roadstead of Tangier; and that, probably on account of this under-current, the sounding-lead had not yet found the ground in the Straits. The simple law of rotation, as well as the incessant influx from the Black Sea, in the north-east corner of the

* It is well known that Cape de Gata is rounded with great difficulty against the current: the Sardinian sixty-gun frigate 'La Regina,' on her voyage to the Brazils, took twenty-two days to double this Cape. Soon after the departure of the "Souffleurs," on the first of July, I fancied that I heard them again; but I was deceived,—it was the current, which was perceived here for the first time during our voyage palpably and on a sudden.

Mediterranean, through the Bosphorus and the Dardanelles, together with the continual pressure from the masses of water of the numerous streams that empty into this great inland sea of the Old World, all strengthen the existence of a western current. It is indeed even believed, that the Mediterranean poured into the ocean at the first disruption of the Pillars of Hercules; for Europe and Asia appear to have been originally connected at this point by an isthmus, in the same manner as Africa and Asia are by the isthmus of Suez,—a fact which may be inferred from the identity of formation in the rocks of Gibraltar and Ceuta. But on the surface, as well as at a depth, a counter though weak current is perceptible, which seems to be partly a side-action of the chief stream, and partly attributable also to the influence of the tides. The chief stream of the oceanic influx, which has only one movement toward the east, flows in the middle of the Straits with a width of 2·8 nautical miles; it is accompanied on both sides by a narrow zone, two nautical miles broad, the waters of which are within the influence of the six-hours' rise and fall of the tide, which is daily perceived on the seashore; and with this zone is connected the band of water that washes the coasts of the two quarters of the globe, where the sea ebbs and flows with perfect regularity.

In order to take advantage of this weak countercurrent, out-bound vessels keep a short distance off land, as our Frigate did. In general the current is said to carry ships more to the middle than the sides of the channel, and many accidents are thus avoided.

No square-rigged ship is able with a contrary wind to stem the current in the Straits. Only smaller vessels, with gaff or lateen sails, can do this, beside the steamers, since they lie as much as two points nearer to the wind, and consequently at a sharper angle to the stream, presenting to it a much less surface*. With a west wind therefore no fleet can pass the Straits from the Mediterranean,—these Straits which, in all the naval wars of France and Spain against England, parted the fleets of Brest and the other ports on the Atlantic from those of Toulon, and those of Ferrol and Cadiz from the squadrons of Carthagena. What an important ally to England against her enemies in the Mediterranean is the west-wind! Whilst Britain's fleets were winning battles at a distance, the west-wind guarded for her the entrance

* A square-rigged ship, a ship of the line, a frigate, and so forth, cannot lie nearer to the wind than six to five points, or 67° 30′ to 56° 15′. The so-called line by the wind which fleets generally choose for a line-of-battle amounts therefore to 67° 30′, whereas in cruising or tacking, on account of the bad sailers and not to destroy the order, it is generally necessary to lie as much as seven points from the wind. Small vessels with gaff and lateen sails,—as schooners, cutters, luggers, xebeques, mistics, in a word what the English designate as "fore-and-aft vessels,"—can approach the wind-line nearer than five points, nay within four and a half points, that is 50° 37′ 30″. It is even said that some can approach to within four points, i. e. 45°, but this seems erroneous. A brilliant instance of the advantage which such a fore-and-aft vessel has in mastering the current was given by the 'Buck' cutter (see Drinkwater, Siege of Gibraltar, p. 73), which fortunately escaped the whole squadron of Admiral Barcelo, trusting to the stream, whilst the Spaniards in pursuit of her were carried so far away by the same current, that Captain Fagg succeeded by a clever manœuvre, and great intrepidity, in reaching Gibraltar in safety.

to the ocean. Nevertheless this ally has not unfrequently proved treacherous and gone over to the enemy, carrying past the Rock into the Mediterranean, under the very eyes of the garrison, the English convoys which were bringing the much-needed provisions to the starving inhabitants of Gibraltar; whilst the same wind carried the French and Spanish squadrons safely through the Straits to join their friends. In May, 1799,* the west-wind swept a Cadiz fleet of seventeen ships of the line, which from their distrest state especially needed its aid, with such fury through the Straits, that nine ships of the line, one frigate and one brig were dismasted, and two other ships of the line broke their tillers.

As long as England keeps possession of the Straits, any combination of the two great fleets of France is always in danger; here consequently lies the strategetical point for England's naval operations. Many a proof of the truth of this assertion is written in blood, and I have only to refer to any of the battles which have been fought in these waters,—the undecided battle between Rooke and Toulouse in the vicinity of Malaga in 1704, Rodney's victory over Langara in 1780 off Cape St. Vincent, Lord Howe's over Cordova in 1782, west of Cape Spartel, the famous battle of St. Vincent under Sir John Jervis, and lastly Nelson's victory at Trafalgar. But of all the battles that have taken place here, none is so peculiarly connected with the Straits of

* Naval History of Great Britain, vol. 2, p. 200.

Gibraltar as the battle of Cabrita Point. In the evening of the twelfth of July, 1801, two hostile squadrons ran out of the bay of Algeziras. Admiral Moreno had hardly doubled Cabrita, when Sir James Saumarez gave chase to his fleet before a fresh east-wind. At twenty minutes past eleven o'clock at night the vanguard of the British line opened her fire upon the 'Real Carlos,' of 112 guns, which was soon in flames. Another Spanish ship, the 'San Hermenegildo,' also of 112 guns, attacked the burning three-decker, which she mistook for an enemy's ship: but before the 'San Hermenegildo' discovered her error, she likewise was on fire. Ere long, at the solemn hour of midnight, illuminating the coasts of Europe and Africa with their glowing flames, the two three-deckers one after another blew up into the air; and seventeen hundred Spaniards, who had just been engaged in mutual conflict, and had only the instant before recognized one another, met their death in fire and flood! At fifty minutes past seven A. M. on the thirteenth of July, the 'Venerable' was grounded on the bank of San Pedro (Sancti Petri), to the north of Conil. Thus ended the battle, which began at Cape Carnero; the rest of the combined squadron reached Cadiz in safety.

Important as is the possession of the Straits to England in times of war, yet no British fleet can remain here under all circumstances, as there is no safe harbour. The roadsteads of Ceuta and Tangier, as we have seen, afford little shelter, but the anchorage in the bay of Algeziras is better, although not without defects. Gib-

raltar moreover, with the exception of a large victualling-office and a fine naval hospital, does not offer a fleet the means of thoroughly repairing and laying in necessary stores—among others of water—in sufficient quantities*. The central point of England's power in the Mediterranean therefore lies in La Valetta in Malta, with its magnificent and spacious harbours, and the important establishments for the fleet now in progress. But the importance of Gibraltar will increase, whenever England establishes here a large coal-depôt for her steam-fleet in the Mediterranean, and this she will be obliged to do. What an entirely new position would England assume, as the mistress of the Straits, if, in case of a war with France, she had a numerous and powerful squadron of steamers permanently stationed here,—a squadron which with every wind could cross the Straits in all directions, in storms could easily change its anchorage, fly from approaching danger, and hold on long after any fleet of sailing ships would have been lost! What a noble station then is the Straits of Gibraltar for the steam-fleet of Britain!

If the Spanish gunboats in the bay of Algeziras, like the Danish boats in the Sound, have gained a lasting fame, how much more will the steamers of Gibraltar figure in the future annals of naval tactics, which, co-operating with calms, west-wind and current, will stop an enemy's passage through the Straits, or make him pay dearly for the attempt! But may it be said that the

* The covering of the present watering-tanks is not bomb-proof, and they are therefore liable to be easily destroyed from the sea.

fleet of the enemy can overcome contrary winds and current, towed by their steamers? Even with a calm this seems almost impossible, if the statement, of which I have no doubt, be correct, that the stream runs at the rate of 2·4 to 4·8 sea-miles an hour. On the twelfth of May, a few days after our ascent of Ætna, I was on board the 'Devastation,' one of the finest steam-frigates in the British fleet, whose engines, Captain Henry told me, were of 400 horse-power, when she towed the 'Howe' of 120 guns and 2619 tons, and the 'Thunderer' of 84 guns and 2279 tons, out of the harbour of Malta,—the three-decker at the rate of four knots, and the two-decker at that of five knots an hour. The sea was smooth, and the breeze, which blew toward us, was scarcely perceptible. The 'Devastation' therefore, powerful as she is, could hardly tow a ship of the line through the Straits even in a calm; she would only be able to keep the ship in her place, or at the most draw her at the rate of 2·6 knots; whilst the steamer alone, without any incumbrance, would cut through the stream at six and a half to seven and a half knots an hour. What an advantage therefore does a squadron of steamers possess in these waters over a fleet of sailing ships! But supposing even that, by the employment of more powerful steamers or the aid of a favouring breeze, the enemy should succeed in towing his sailing fleet through the Straits, the superiority of steamers with a west-wind and a calm is not the less certain: the amount of this depends however on the circumstances of each particular case. The great thing is to turn these circumstances to proper ad-

vantage. A new æra in navigation and naval warfare seems to be opening; it is contemplated to adapt steam-engines with screw-propellers to ships of the line, in order to protect them in calms against the attacks of steamers,—engines powerful enough to move these large ships at a rate of five knots; but even this would not suffice in all cases to oppose the necessary force to the current. Straits are therefore peculiarly and under all circumstances the proper theatre for the operation of steamships in warfare, which will in a certain degree —I must be excused the unseamanlike comparison— transfer the harassing character of a Cossack or Bedouin attack, combined with the obstinacy of a murderous fire of sharpshooters, to the watery element; and naval tactics will perhaps one day be transformed in like manner as the irregular bodies of troops in revolutionary forces have changed the stiff tactics of land armies.

Steamships introduce an entirely new element into naval warfare; they admit the possibility of arranging and leading on to a battle, and of relieving and replacing damaged ships. In attacks on fortified places, they afford the means of strengthening isolated points in the line by ships in tow, and consequently suggest the first idea of a reserve at sea; lastly by their aid ships are enabled to escape from a superior enemy, even when in a damaged state, in cases where this would be impossible with sails alone. In fact steamers may venture into waters which any cruiser would endeavour to avoid; they will even prefer such waters, to obtain a superiority over their enemy in sailing ships; they will welcome

groups of islands, with their alternate calms and squalls; sandbanks and rocks will afford them protection; the ocean calms will open to them an unlimited field of activity, and the currents in straits will combine with them against their foes. Two things alone are necessary for the realization of these sanguine ideas of steam power, namely the Archimedian-screw, by the employment of which steamers can be exposed to an enemy's fire uninjured, and depôts of coal in the vicinity of their scene of action,—that is to say, as long as coals are indispensable. Gibraltar forms the coal-depôt,—the Straits, the open scene of action; let us ascertain its extent: this is not small, and ample enough for the exercise of important warlike forces*.

The extent of the Straits of Gibraltar from west to east amounts to 32′ 20″, or rather more than thirty-two English geographical miles; their opening into the Medi-

* The following comparison of breadth may be of some interest to the numerous travellers who now visit the Mediterranean:—

Cape Spartivento	37°	56′	0″	N.
„ Passaro	36	40	0	„
„ Matapan	36	21	30	„
„ Europa	36	6	20	„
Tarifa	36	0	50	„
Valetta	35	53	55	„
Cape Benlisa (Malta)	35	49	0	„

The north point of Africa, Cape Bianco (Tunis), lies in 37° 20′ 0″ N., consequently 1° 2′ = 20 German miles more north than the south-point of Europe. Valetta in Malta (35° 53′ 55″ N.) is about 1¾ German mile more south than Tarifa, and about 21½ German miles more south than the most northern point of the African coast. See 'A Complete Epitome of Practical Navigation,' etc., by J. W. Norie, 1840. Table LVI. p. 297, seq.

terranean between Ceuta and Europa Point, 12′ 10″, or about twelve English miles; and their broad opening toward the ocean, between Espartel and Trafalgar, 23′ 10″, or twenty-three English miles. At about the middle of the Spanish coast the peninsula of Tarifa projects toward the middle of the Straits, lying in north latitude 36° 0′ 50″, the true southern extremity of Europe. From Tarifa to Cape Alcazar the distance is 8′ 20″, or rather more than eight English miles. East of this line up to that between Punta de Europa and Punta de la Almina (near Ceuta) lie the proper Straits; to the west they widen considerably, and the Spanish coast recedes abruptly in the direction of Trafalgar. The point at which Europe and Africa approach the nearest is between Punta de Canales and Punta Cires; the distance between the two quarters of the globe being here only 7′ 20″, or rather more than seven English miles. Whilst the south coast of the Straits is feared on account of its reefs, the north coast is dreaded for its sandbanks, which form two groups, one lying southward between Punta Paloma and west of Tarifa, the other between Trafalgar and Conil. But we will now return on board the 'San Michele.'

After the lapse of some hours the wind blew again fresh from the east, and the Frigate dashed along at the rate of 12·3 to 12·5 knots, under single reefed topsails and courses. We passed the most southern point of Europe, the little town of Tarifa lying at the foot of a steep conical mountain, obliquely across to Tangier, and approached the roads, in order better to survey the

foreign men-of-war anchored before this chief port of the empire of Morocco, to give by their imposing presence proper weight to the demands of their respective Powers.

The coasts of Europe were veiled in a bluish mist, while the dark green mountains of Africa grew gradually more distinct, and their beautiful outlines more sharply defined. The Pillars of Hercules, the far-projecting Gibraltar, and the truncated pyramid of Apes' Hill, lay behind us in a misty distance, like the extreme vanguard of Europe and Africa, separated only by the narrow, azure arm of the sea. But soon the town and rock of Gibraltar—the guardian and key of the Mediterranean—vanished; and in its place appeared in the north-west, scarcely distinguishable, the light blue, rounded Cape Trafalgar, like a long flat curved island stretching into the ocean,—that Trafalgar which conferred on Great Britain the sovereignty of the seas. Here it was that Lord Nelson at length came up with Admiral Villeneuve, whom, after his fortunate escape from Toulon, Nelson had sought first throughout the Mediterranean, as far as the coast of Egypt, then pursued through the Straits to Barbadoes and Trinidad, and again across the ocean back to the Straits; when, not finding him there, he explored the Irish Sea in pursuit, and turning southward again at length came up with him off Trafalgar. This unparalleled perseverance here met with its complete reward; the naval power of Spain was destroyed, England's foes were annihilated, and Nelson found the noblest reward of a hero—a victor's death.

Behind the wooded shores of Africa rose in the far distance the last blue summit of Mount Atlas. We sailed past the woods of Cala Baca, and saw behind Cape Malabata the wide bend of the steep sandy coast, in the centre of which the white city of Tangier* rises up the acclivity

* I am indebted to the kindness of the Rev. Dr. Pischon for the following sketch, as well as for some others in subsequent parts of this Work.

Tangier derives its name from the ancient city of Tingis, which lay not far from the present site of the city; at a very early period inhabitants from this place were transplanted by the Phœnicians to Spain. On its rebelling against King Bogud of Mauritania, the Emperor Augustus granted it a free constitution, and the Emperor Claudius, on changing the whole country into a province, made Tingis its capital, and named the province from the city Tingitana. It was conquered by the Vandal king Genserich in 429, and afterwards by Belisarius in 534, and remained in the hands of the Byzantines until, under the khalif Walid I. the celebrated general Musa Ben Nosair about the year 705 subdued the country of Tanja, took the capital, Tangier, and garrisoned it with ten thousand men under the general Tarik Ben Ziad, who sailed from hence and landed in Spain. After 804 it fell into the power of the Edrisides, who freed themselves from Harun al Raschid, and it remained in their hands, until the Ommaijades from Spain, who had shortly before lost a battle here, took it together with the whole of western Mauritania, Magreb al Aksa. On the overthrow of the dominion of the Ommaijades it had rulers of its own, the last of whom, the old Socra al Barqueti in 1078 lost his life in a battle against the Moravide Jussuf Ben Tasfin, whereupon Tanja fell into Jussuf's hands. When the Muahedim (Mohades) appeared against the Moravides, and Abd-el-Mumen besieged Morocco, Tangier went over to him in the beginning of October 1146. In the thirteenth century it passed into the hands of the Castilians, from whom the Merenide Abu Jussuf took it by storm in September or October 1273. A Castilian and Genoese fleet, in July or August 1291, destroyed the African ships which were going to attack Sancho of Castille in sight of Tangier. João I. of Portugal, with his three sons and his brave general Pereira, took Ceuta by storm in 1415. A Portuguese army, led

on the west side of the bay; foreign men-of-war were lying before it in the roadstead, which is exposed to the north and north-east winds. The 'Jena,' Commodore Turpin, had just hoisted his flag and top-gallant sails, at the same instant with the 'Africaine' frigate, the brig 'Le Cerf,' and a large steamship also belonging to the squadron. Her example was followed by the Spanish frigate 'La Cortez,' and the American corvette (or "Jackass-frigate"), which both hoisted the Commodore's flag. Many coast-batteries extend along the town,

by the Infant Don Henrique and Don Fernando, brothers of king Eduardo, besieged Tangier in 1437, but was surrounded by a large Morocco army, and compelled by starvation to purchase a free exit, on the promise of delivering up Ceuta to the Morocco people. Don Fernando remained behind as a hostage; and as the Cortes refused to consent to the surrender of Ceuta, he remained in imprisonment at Fez, where, after enduring great suffering, he died a martyr's death on the 5th of June, 1443, and gained the name of the "resolute prince," and "the saint." In subsequent struggles with Africa, the Portuguese in 1471, under the sway of Alfonso V., took Arzila by storm with great bloodshed; this so terrified the inhabitants of Tangier that they quitted their city, which was at once occupied by the Portuguese. When king Sebastian undertook his great warlike expedition against Morocco, he landed on the 24th of June, 1578, in Tangier. On the change of government in Portugal in 1640, Tangier remained in possession of the House of Braganza, whilst Ceuta was transferred to Spain. When Charles II. of England married the princess Catharine of Portugal, the daughter of John IV. of Braganza, Tangier was given him as part of the dowry of the princess. The cost of maintaining it was too great for the English, and they demolished the place in 1684, whereupon the inhabitants of Morocco retook possession, rebuilt it irregularly, and fortified it. Ever since Tangier has remained in their hands, until recently the bombardment by the Prince de Joinville, on the 6th of August 1844, has again brought it forward in history.

whilst a high wall terminates it on the north side, which leads down from the top of the heights to the strand.

In Tangier itself, which has quite a European aspect, neither churches, mosques, nor minarets are distinguishable; but I saw upon the heights at the back of the town the cupolas of a group of mescheds or Mussulman chapels. The east-wind carried us out of the Straits like a flash of lightning, past Tangier and the green hill of Cape Spartel, descending to the sea. Spartel and Trafalgar were soon lost behind the horizon, and now for the first time we felt the long waves, giving the Frigate a motion quite different from that experienced in the Mediterranean, and which announced our entrance on the Atlantic Ocean. Through the windows of the cabin I saw behind us the white foam upon the azure-blue waves, which began to follow us in long connected lines. The sun was burning hot.

At noon we were in north latitude 36° 29′, and 6° 18′ 36″ west longitude. After sailing in this manner for some time, in order to round the banks of Trafalgar and Conil more safely, we shaped our course direct for Cadiz.

Scarcely had an hour elapsed, when we again came in sight of Cape Trafalgar. A straight, short mountain, descending steeply to the sea, lay behind us on the right, whilst the flat, sandy coast of Spain, with isolated, low, bluish mountains in the background, extended in a long uniform line on our starboard beam and bow, like the Baltic coast, terminating with the snow-white town of Cadiz. The turret-like gables or embattled house-

tops of Cadiz were seen rising out of the dark-blue waters, together with its towers, and the lofty yellow dome of its cathedral, looking like a mosque in the centre of the town: the white lighthouse stood in the foreground.

A SUNDAY IN CADIZ.

JULY 17th.—It was Sunday: one of the Frigate's boats conveyed me as early as ten o'clock to the 'Thunderer,' lying at a short distance, on board which ship I wished to attend divine service. The east-wind, which had carried us across the Straits to Ceuta on the fifteenth, had brought the 'Thunderer' in seven hours from Gibraltar to Cadiz. On my arrival I found all the ship's company drawn up in lines on the different decks. This mustering, which takes place regularly every Sunday, and in many ships on one week-day besides, is called by the English "Mustering by divisions." Captain Pring showed me the spacious holds of his fine two-decker, and at the same time his choice crew of seven hundred and fifty men, who, with the exception of a recent accession of a hundred men, had taken an active part in the bombardment of Acre and the attack on Sidon (Seyda). The ship was in the most perfect and admirable order, and in a condition for battle. During a practice of the

guns, in the course of the ensuing week, I had an opportunity of observing the skill and science of the crew of the 'Thunderer.' Six shots at seven and eight hundred yards were fired, and each time the target-cask with the little flag was sunk: most of the balls likewise flew so close to the cask, that it was every time splashed by the water. I have seldom witnessed such correct aim and precise direction: I might almost say that this firing with great guns was as exact as rifle-shooting. Such skill and precision is the fruit of the school for naval gunnery established for many years on board the 'Excellent.' Every ship of the line, frigate, and large-class steamship of the British navy has, among her officers, a lieutenant or mate who has been trained in this school, and who superintends the gunnery instruction in his ship. Mr. Jenner is the "gunnery-lieutenant" of the 'Thunderer,' and most effectively superintends this important branch of the service. It was quite a pleasure, when the last sounds of "Hearts of Oak" were just dying away, to see the starboard guns run in, and charged with force and precision by the fine active young fellows, who worked and served them with true seamanlike ease and dexterity. The black, shining growlers seemed to have won the respect of the crew, and the well-known sounds awakened the remembrance of the days of Acre and Sidon, and a thirst for fresh exploits,—those sounds which had re-echoed through the 'Thunderer' on the eve of battle, summoning so many brave British tars to victory, and so many to another world.'

The two lower batteries of this ship of the line are armed with thirty-two-pounders, and each battery with four sixty-eight-pounders for shot or shell. The deck-battery of the eighty-four-gun ship consists of thirty-two-pound carronades, which hit with great accuracy at eight hundred yards. The new kind of pumps can be manned, if required, and worked alone on the orlop under the lowest battery.

In our walk over the ship, I inquired of Captain Pring for the "Troop-deck," fitted for one thousand men, which Mr. Oliver Lang, the builder of the 'Thunderer,' had shown me when I saw her on the stocks ten years before at Woolwich. This deck was very soon removed, as it impeded the free circulation of the air. The cabins of the lieutenants and "young gentlemen" are spacious and comfortable: the same may be said, in a much greater degree, of the Captain's cabin, lying under the poop, which was fitted up with great taste and unusual "comfort,"—an arrangement in which Mrs. Pring, who was on board, had doubtless contributed her aid. The galleries on the stern of the two-decker gave this floating dwelling a peculiar charm.

When the mustering was ended, the boatswain sung out in a rough voice, with the shrill accompaniment of the silver whistle, "All hands rig church!" and instantly the crew poured forth from every corner and hatchway, bringing the folded benches; these were arranged in rows, one behind another, facing the altar, which was placed on the quarter-deck. We took our seats with the officers on each side, and the crew sat on

the opposite benches,—the marines, with their red coats closely buttoned up, parted from the "blue-jackets," who sat perfectly at their ease and seemingly quite comfortable in their Sunday's dress: it looked like a flower-bed, accurately squared off.

It was a fine morning, and not a cloud was to be seen in the blue sky, toward which the masts of the mighty 'Thunderer' arose. The assembly sat bare-headed in rows before us, with their eyes lowered to the prayer-book, and repeating the responses. The deck glowed under our feet, and an oppressive sultriness lay upon the bay of Cadiz, girt by a flat coast; but now and then a little cooling breeze stirred, though scarcely perceptible,—the forerunner of the approaching fresh sea-wind. Unfortunately, from the chaplain's indistinct pronunciation and broad accent, I could understand little of the sermon. After an excellent luncheon with Mrs. Pring, I returned on board the 'San Michele.'

The reader may picture to himself the bay of Cadiz as a small *Haff*, similar to those along the coast of the Baltic, but on a larger scale; he must however imagine one with a considerable depth of water, and a very broad mouth, opening to the west; on its south side lies Cadiz, with the little town of Rota opposite. The town of Cadiz rises from the blue waters at the end of a flat, sandy tongue of land, which stretches from the mainland northwards, or more properly from S.S.E. to N.N.W., and then turning west at a sharp angle, projects into the ocean with a small hook, which the town and fortifications cover. This hook is continued by a

reef, on which is erected the low fort of San Sebastian with its lighthouse. The narrow land-front consists of a curtain with two demi-bastions, with ravelin and counter-guard in a dry ditch in front. The town is surrounded by connected casemates, and a wide platform for mounting guns. I scarcely in any instance saw an under line of embrasures; they are perhaps walled up temporarily. The platform, on which are mounted a few badly appointed guns, serves as a public walk. At certain points the profiles are remarkable; for instance I estimated the profile on the connexion of the demi-bastion towards the bay, at the point where a barrack is said to be placed in the casemate, at from seventy to eighty feet, when I went under it at low water: on other spots it amounts to about thirty feet; this is regulated, as I have said, entirely by the ground.

At the point where the sand-bank joins the mainland, and the Torre Gorda rises, (the first of the eight towers which extend along the coast to Algeziras,) commences the flat south side of the bay, a large plain traversed by a system of artificial ditches, which are converted by intervening narrow strips of ground into a net of connected squares, united by small sluices. The sea-water is let into these squares, and the sluices are then dammed up. The water evaporates, and after about a month the pure salt is removed, and laid on the intervening spaces. There are likewise large salt-depôts here in the shape of tall, white trapeziums.

On a plateau in the middle of this plain, which is

covered with salt-works, rise the towns of Isla de Leon or San Fernando (the former celebrated for its observatory, which is charmingly situated among rich woods and groups of palms) and San Carlos or La Nueva Poblacion, that gigantic project which was strangled in the birth. Three high buildings stand close together,—a large barrack, an unfinished church, and an enormous government-house with a colonnade,—all empty! they look like one of Nebel's sketches in the market-place of Mexico. To the east lies the naval arsenal, La Caraca, on the opposite bank of a broad and deep arm of the sea, which, running from the south-eastern corner of the bay, describes a large bend to the south and east, before joining the sea at the insular fortress of Sancti Petri. This Rio de Sancti Petri converts the spot upon which lie San Fernando and San Carlos, and with which is connected the isthmus of Cadiz, into an island. The Puente de Zuazo, east of Isla de Leon, the only passage over this principal channel, is defended by a small closed work upon the bank on this side, a kind of walled tambour, whilst three stone redoubts are advanced over the bridge. On the other side of these works is a narrow and short tributary to the arm of the sea, which is bridged over by the Puente del Espartero. A weak and dilapidated earthwork here forms the *tête du pont*. Over this bridge the road leads to the neighbouring Chiclana, the summer residence of the "Gadetanos," behind which rises a little chain of hills that reminded me of the Potsdam hills. On both sides of the Rio de Sancti Petri extends the wide salt-plain, which with its impassable,

wide and deep ditches, renders the island at the extremity of which lies Cadiz, impregnable on the land side. This intersected ground no doubt greatly favoured the resolute defence of the fortress of Cadiz against the French.

A navigable water of at least four fathoms' depth (one point excepted, where the depth is only twenty-one feet) leads from the roadstead to the naval arsenal La Caraca, situated near the opening of the Sancti Petri into the bay, which with its labyrinth of dilapidated buildings looks like the ruined palace of a bankrupt nobleman. In the middle of the broad channel lay a truly piteous spectacle—the old, worn-out 'Soberano,' of seventy-four guns, one of the few relics which Spain has saved from the shipwreck of her past greatness.

I found the Dry Dock ready to receive her, in which the French ninety-gun ship 'Le Suffrein', had been repaired, after being stranded, together with all the merchantmen in the roadstead, by one of those violent squalls which at times sweep over the bay of Cadiz.

This Dry Dock is the only one whose gates are still serviceable; those of the two others are rotten: the granite of the three basins has alone withstood the storms of time. I counted about five building-stocks for large ships: they were without roofing (Cuff's), which is not needed in this warm climate, and a considerable cost of maintenance is thus saved. A few guns lay ranged in good order, and some timber was immersed in the mud of a canal, to preserve it: there appeared to be few or no other stores. Before the entrance-gate

into the Caraca a ragged, barefooted sailor kept guard, with a naked boarding-knife; and the few individuals, who in some degree enliven this solitude, harmonize strangely with the lamentable condition of the whole.

Whilst the flat south side of the bay of Cadiz, seen from our anchorage, with its three villages, vanished in the blue mist, the eastern coast came out more distinctly. On this side the bay, which forms several smaller bays or inlets, is girt with sand-hills, in parts wooded, on which lie the towns of Puerto Real and Puerto de Santa Maria. Upon the last point of the sand-hills, between Santa Maria and Rota, extend detached coast-batteries, in a curve to the south-west; but the only important one is that of Castillo de Santa Catalina, erected on a projecting point of land. Close by Puerto Real, a low sand-bank on the south-west, indiscernible from the roadstead, projects toward the opposite sand-bank, narrowing the bay to a channel, and dividing the inlet into a shallower one on the south and a larger one on the north, which properly forms the roadstead. This flat peninsula is the famous Trocadero, which appeared to be separated from the mainland by a line of weak earthworks.

It was natural that I should here call to mind the hero of Trocadero, who had graciously placed at my service the fine frigate. The King of Sardinia was the first to mount the ramparts at the storming of this work, and here won for himself the title of a "premier Grenadier de France." In the gorge of the Trocadero is the small, closed Castillo de Matagorda, and opposite to it

on a projection of the sand-bank beyond the channel, which is four to six fathoms deep, the Castillo de Puntales, celebrated for its defence. At a few hundred yards south of this, the strong fort of San Fernando obliquely intersects the tongue of land, nearly in the centre of its length, which from this point narrows gradually. The latter is strengthened by a walled dam, upon which the road leads inland past the Torre Gorda; during earthquakes however the flood pours over it into the bay. In order to keep the communication open as long as possible, for foot-passengers at least, the road is here enclosed by walls from three to four feet high, supported on open arches.

Let us now turn from the wide circuit of the coast around the bay of Cadiz, to its entrance. On the north side of the town we observe a group of banks and reefs, stretching half way toward the opposite shore: the perils of the Puercas, the Cochinos, the Frayle, the Galera, and the Diamante had all to be encountered before the proud Frigate could unfurl her sails, and steer across the wide expanse of ocean to the New World!

The afternoon of this day was spent very differently to the morning. I landed at half-past three, to be present at a bullfight. Following the crowd we passed through the centre of the town, and soon came to the seashore, where stands the immense, open, octagonal Circus set apart for these cruel sports. Above it wave the Spanish, the white English, the French, and the Portuguese flags.

It was still early when we took our places, nearly in

the top row of seats. What a motley crowd filled the amphitheatre and thronged the sandy arena! and what an incessant bustle and noise, mingled with shrill cries! The people are perfectly wild and uncontrollable in the Torrida, and have everything their own way; the poor National Guards hardly interfere at all.

If any harmless individual has by chance the misfortune to attract the notice of the multitude, all eyes are turned to the place where he is seated, staring up at him, and a frightful screaming begins, which continues until the people at length are tired and gradually become quiet again. The Spaniards like on these occasions to be true Spaniards; nearly all the men, of all classes, wear jerkins, elegant parti-coloured jackets ornamented with braid and broad coloured edging, black jackets trimmed with bugles, or simple white and striped stuff ones, like those of the lower classes, with the universal addition of the national Spanish hat. The common people wear a red band round their body.

The public here, as I said, have their caprices; I was told that they once compelled a stranger to pull off his yellow kid gloves, and obliged another to leave the place merely because his elegant dress-coat did not please them. There were many strangers present today, including a large attendance of the officers from the different ships in the roadstead. The 'Thunderer' was most numerously represented, for, beside Captain Pring at the head of a large portion of his staff, a strong muster of stout British sailors had also seated themselves comfortably on the rows of benches. Mrs. Pring's presence

likewise was indispensable, and she was seated beside her husband, having reluctantly yielded her scruples against the desecration of the Sunday. Below us sat two Frenchmen: the *aspirant de première classe* came first, took his seat, pulled on his yellow kid gloves, without being at all incommoded, took a French newspaper out of his pocket, and attempted to read; but being disturbed by the noise and bustle, he finally tucked it under him. The other Frenchman in the frock-coat suffered greatly from the heat; he pulled a yellow handkerchief out of his pocket, and drew it over his head on the sunny side. We sat waiting for the shade, having taken our "shady seats," for which we had to pay a higher price; *en attendant* some fellows scrambled about the benches with refreshments.

But the most eager spectators, without whom a Torrida is not conceivable, are the women. On the lower rows of seats was a perfect swarm of red, yellow, and various-coloured shawls, red being the predominant; whilst a sea of fans was in perpetual motion in front, the heads covered with handkerchiefs keeping up a corresponding motion. These women belong to the lower classes, and are frequently seen carrying babies in their arms, which are thus early familiarized to these spectacles, and draw in a love for such cruel sport with their mother's milk. On the top benches, shaded by a slight awning, are seated the delicate beauties of the higher circles; these tender ladies, veiled in black lace, with dark fiery eyes and glossy raven-black hair—these ladies who could not see a fly killed without fainting—are here insatiable; the

spectacle can never be savage or exciting enough, and they can scarcely repress a scream of joy when the bull rips up the poor horse's belly, and the bleeding entrails hang trailing on the ground.

What a collection of fans is seen in the Torrida—from the elegant *abanicos* of these delicate ladies, down to the gaudy, paper fans of the lower classes! for even the beggar-women understand, with Spanish coquetry, the art of playing with a fan. There are moreover abanicos of all sizes; I have seen them on the lower benches full three feet long, so that whole families could sit behind them.

The chief municipal officers had taken their places in a gallery, and on the ground below were assembled, also in a separate box, the Espadas, in their rich Spanish costumes embroidered with gold and silver, and bright-coloured cloaks,—just such figures as are frequently seen upon the stage.

On a sudden was heard the loud ringing of a bell, amidst a continued din. The arena was instantly cleared, and the barriers opened on the left. Five Picadores, in two parties, the two reserve combatants forming the second body—large-made, robust men, every one a fellow of iron—rode into the arena, followed by the four mules, decorated with little red and yellow flags and ribands, intended to drag away the dead horses. On the opposite side the Espadas, headed by the celebrated Montes, the Matador, stepped into the middle of the arena, with the Bandelieros, dressed in the old Spanish costume with shoes and stockings, and bowed to the centre tri-

bune, whilst the Picadores lowered their finely-pointed lances. The trumpets sounded! the Espadas and Bandelieros, with long coloured shawls under their arm, retreated behind the wooden screens, which are placed as guards to the numerous doors leading to the rows of seats. The Picadores, with their enormous, broad-brimmed, trencher-shaped hats of whitish grey felt, with a small round crown, are dressed in richly embroidered velvet jackets, their legs cased in iron leggings, and with one or two iron rings round their body; over all is drawn the yellow leather trowsers, forming with the yellow leather boots and large spurs one single dress, which gives an indescribable clumsiness to the lower part of these heavy horsemen: the effect of this dress is heightened by large, square, sallow or brown faces, with black, bushy eyebrows. I know not why, but the Picadores reminded me, in their whole form and figure, of the singer Blume in the character of Bertrand, in "Robert le Diable." They were mounted on mares, yielding neither in age nor ugliness to the worn-out jade of any cockney huntsman. Three Picadores, with their lances in rest, stationed themselves around at equal distances, with their backs close to the band.

The trumpets sounded again; the door under the tribune opened, and the bull bounded at full gallop into the circle. For an instant he stopped short, and then rushing at one of the Picadores, who stood quietly awaiting him, he received a stab from the lance; whereupon he dashed close past the second Picador, and flung the third to the ground. This sport continued for a long

time. The Picadores have a difficult part to play: if they were allowed to act on the offensive, it would be much easier. These men may be said to be bred up with the cattle; their proper business is to drive the beasts from place to place, like the peasants armed with pointed sticks who are seen trotting Cossack-like over the Campagna of Rome on their active little nags. Thus the Picadores from their youth are accustomed to deal with these bulls. If one of the men falls, he cannot rise again without great difficulty, on account of his iron leggings, and the horse almost always lies upon him. In this case the Bandelieros run nimbly into the circle, and with their coloured shawls tease the bull, which generally pursues them furiously. But as the beast every time rushes at the cloth, they run little risk, unless unfortunately they chance to fall in the quick and short turnings. Meanwhile the man of steel and iron is helped from under his horse.

The whole sport consists in the number of horses that are killed. The first victim was an unfortunate grey horse, which was thrown to the ground, quivered for a few seconds, and then stretched his legs. When a steed is wounded—that is to say, fairly struck—the Picador rides out of the circle, and has the animal's eyes bandaged: he then returns to the combat. For half an hour we saw a poor grey horse with his entrails actually hanging down to the earth; nevertheless his rider spared not the spur, as the poor creature, aware each time when the bull was rushing at him, endeavoured to escape the attack of his foe. At length, when the bull—one of the

last that appeared in the lists this day—would no longer repeat his attacks, the Picador rode up close in front of the animal, in order to irritate him; nevertheless, in spite of his renewed wounds, it was a long time before the poor horse fell dead upon the ground.

Fortunately for the Picadores who fall under their horses, the bull shares the fault of many a general, and neglects or is unable to follow up his advantage. I only once or twice saw the horned victor turn round, to give his victim the *coup de grace*; a couple of unlucky chestnut horses shared this fate. The bull pursues the Bandelieros only a few yards: if his eagerness for the fight abates, the whole assembly becomes restless; there is a ringing of bells, an uproar and cries; the ladies vie with one another, exclaiming, "Fuego!" and the men shout, "Another *paxito*!" At length all break forth into a general chorus of exultation, "The brave bull!" The animal has regained courage: there lies the Picador, and the poor horse drags itself along on three legs. But with this last effort the bull's fury is exhausted; he can do no more, his spirit is gone, and he bleeds freely under the mane and on his neck. The music now strikes up; the Bandelieros have armed themselves with short sticks, tipped at one end with a barbed goad: swinging above their heads these sticks, which are bound with white or coloured paper, they run straight at the bull, face to face, and thrust the goad into his neck in front, just at the instant when the infuriated beast again lowers his head and prepares to dash at them. The bull now runs madly forwards, but the

Bandeliero has kept his body on one side, and springs behind the screen.

Sometimes they also fix a kind of rocket and red-hot irons into the animal's flesh, but this I cannot distinctly remember. These instruments of torture it is which the excited beauties of the circle, inflamed with cruel ardour, intend, when the exclamation "Fuego, fuego!" rises from their ruby lips, while their sparkling black eyes shoot down fiery glances full of scorn and fury on the poor exhausted, horned hero of the arena. Fresh Bandelieros are always ready to gratify those beautiful eyes, and to replace the goads as the bull shakes them off, that his rage may not too soon subside.

A third time the music sounds! the third and last act begins. Montes, the famous Montes, the darling of the Spanish people, the chief of all the Espadas of the Peninsula, drest in a green jacket, advances against the bull with drawn sword, and holds before him his scarlet cloak edged with a white border. At the moment when the furious beast is about to rush at the cloak, the Matador stabs him with his sword between the horns, just at the point where the mane terminates. The bull sinks on his hind-quarters, then falls upon his side, and Montes, the prince of his profession, is overwhelmed with marks of applause. The black mantillas move to and fro, the enraptured dames wave their handkerchiefs, and as the victor walks around the arena bowing to the multitude, the gentlemen throw down to him their hats from the top galleries, which he catches cleverly and throws up again to their owners with great adroitness.

Montes himself, before he went to look for the bull, had thrown his black velvet cap to an acquaintance, and now received it back.

Immediately a second champion with broad forehead and large horns, but of small make, was let loose in the arena, and the same scenes were repeated until eight victims had thus fallen. The first was the most powerful animal, although we should not have considered it by any means remarkable for strength.

At the appearance of every new bull, our excitement increased, and we soon began to discern at the first glance their character stamped upon their forehead. The multitude were dissatisfied, for the beasts would not show sport properly, or rather knew not what to make of the whole affair. Several times Montes volunteered to act as a Bandeliero with great courage and dexterity: he placed himself before the bull, and looked him straight in the face, and the animal seemed really to fear him. Another time he seized hold of the bull's tail, and let himself be dragged round and round, or gave the beast a kick between his horns. But Montes only played these tricks with the more powerful bulls. Once the mad animal had nearly mastered him, for Montes stumbled and fell; but by a fortunate accident the bull also at the same instant tripped and came to the ground.

When the Torrida was ended, three horses were lying dead in the Circus, but fifteen horses were in all the sacrifice of this day's sport. The people were greatly displeased, for they had set their minds upon having at least forty such victims!

At first I trembled for the life of the Picadores, not knowing that they were clad in armour; but I soon saw that they came to no harm, except two, who were thrown to the ground; they were however so little hurt, that, leaning quietly against the wall, they remained to witness the rest of the Torrida. It was clear that the pleasure of these scenes turns principally on the slaughter of horses,—the bull and men are only secondary objects of interest.

The bull-fight on the whole leaves a revolting impression on the mind: one is involuntarily annoyed by the cruelty of the sport, and disgusted at the sight of the people thirsting for blood, staring greedily upon the scene, and often acting like madmen. This feeling of repugnance, of horror, which at the first instant fills one's whole soul, gradually lessens, and pity is succeeded by impatient excitement, into which the maddening fight hurries the spectator: he takes part for or against, and it is impossible to deny that he shares in a certain degree the frantic interest of the moment —an interest which is near akin to a sense of pleasure. But the better feelings predominate, and one shudders at these constantly repeated scenes of bloodthirsty horror, which excite in the panting bosom of the fiery Spanish dame a sympathy, increasing every instant, and almost bordering on a sensual delight. With feverish, glowing cheek and sparkling glance she peeps out from the black lace mantilla drawn over her head, and forgetting all around showers her applause on each combatant in turn,—encouraging the bull with loud

cries, or transporting herself to the side of her hero in the perils of the arena; every onset of the bull against the favourite Matador makes her tremble, and yet she cannot resist the torturing pleasure of gazing down again and again into the arena, until the beast, struck by the sure arm of the Espada, rolls over at her pretty feet!

We followed the crowd, through narrow streets and across small squares, to the Alameda, which extends along the shore of the bay shaded by fine trees. The costumes seen in Cadiz are not at all different from those in other parts of Spain, but it struck us that all the country-people of this part go about unarmed. Among the slender, black, female forms and their Mayos, who enliven the promenade, among the lively southern throng, were seen the naval officers in their plain blue dress, in parties according to their nations, who, like all those belonging to the unstable element, feel themselves strangers on land. Soldiers, in their various coloured uniforms in the French cut, are rarely seen in Cadiz, for the whole garrison is said to consist, beside the militia, of a single battalion of infantry of six hundred men,—surely a great mistake, considering the size and importance of the place.

But who would expect to meet, among the elegant young gentlemen, attired in fashionable dress-coats, who ornament the public promenade with their presence, those very students, who now in their holidays spend an hour of the day in wandering through Cadiz, drest

in fantastic costumes, and performing grotesque dances at the corners of the streets, to the sound of the tambourine? after which, like common street-singers, they go round among the crowd of gaping spectators, to beg the money which is to pay for their education.

A part of the throng of black-veiled ladies had seated themselves on the side-benches, under the shade of the trees, to enjoy the evening cool and whisper together undisturbed, quietly contemplating the scene around, or attracting the admiration of the passers-by. The *abanicos* of these ladies were in constant motion, and the Andalusian eyes behind them vied in fiery lustre with the beams of the evening sun, which diffused a purple glow over the light foliage that overshaded the Alameda and its busy scenes, the sea and the distant shores of Santa Maria. This play of eyes and fans seems to constitute half the life of these Spanish ladies, and what grace do they exhibit! The same is everywhere seen in the Alamedas of Spain,—in the broad avenues of Malaga, under the shady trees and by the splashing fountains of Granada, in the noble valley at the foot of the Nevada, or at Seville, romantic Seville, where in the silvery moonlight the forms of handsome females may be observed seated on the high balconies or in the open doorways, listening to the soft speech of their lovers; whilst peeping through the grated doors and narrow entrance-hall into the small lighted courtyard behind, surrounded by a colonnade, the inmates of the house are seen sitting sociably together beside the plashing fountains, and here

and there the sound of a guitar reaches the ear,—everywhere you meet the same women, and the same play of fans and eyes among the youthful señoritas and the handsome doñas, throughout the whole of Andalusia as here in Cadiz. And yet the Alameda of Cadiz has one peculiar charm; beside the motley, moving throng, it presents at the same time a view of the sea, the ever-restless element, whose waves come rolling and roaring up, and break at the foot of the rampart which forms our promenade. The noise of the waves, that sound of music sweet, which the ear listens to for hours together untired and unsatisfied, that whisper of the ocean, one instant threatening to swell into an angry roar and thunder, and then subsiding again and reaching us in scarcely audible sounds—the noise of the breaking waves caught our ear, and riveted our attention in the midst of the busy throng, like some beloved voice that finds its way to our heart.

From the Alameda we repaired to the theatre, to hear the opera of "Lucretia Borgia" in Italian. All the boxes of this house, which is not very spacious, together with the wooden ceiling, are painted scarlet, which produces a strange impression.

The most glorious Andalusian moonlight silvered the smooth surface of the bay, as we returned to the roadstead. Between our Frigate, lying in six-fathoms' water, and the 'Thunderer,' anchored within that line, we were shown the anchorage from which the 'Suffrein' was torn by a violent south-west storm. The storms

from the west are here generally considered the most dangerous, although in summer the roadstead is sometimes visited by such violent storms from the east, that the ships drag their anchors and are carried out to sea.

THE DESERTAS AND MADEIRA.

JULY 29th.—The sun was already sinking, when at six o'clock P.M. the four isolated hills of Porto Santo, in N.W. 17° W. on the right before us, at a distance of thirty-eight nautical miles, rose out of the waves, into which four days before the low, sharp promontory of Cape Trafalgar, the extreme point of Europe, had sunk at nightfall, just as the vesper-bell was calling the crew to evening prayers. Two of these hills were small and pointed, and rose alternately with the two others which appeared to be larger and cap-shaped. In the south the chain commenced with a hill of the former description, terminating with a cap-shaped hill on the north. The two middle elevations were soon united by a ridge, which rose from the ocean between them. The sun's golden orb now dipped into the sea, flooding Porto Santo with a red evening glow, whilst the low land of the Desertas, stretching out before us, assumed a blue colouring. Between the two, a dark cloud lowered upon

the horizon, in which we imagined that we could distinguish Madeira.

The air this morning was pleasantly cooled by a refreshing rain, and the sky was richly decked with clouds of varied and beautiful forms, which, after the constant blue firmament that we had been used to in the Mediterranean, had a peculiar charm. Soon after the first glimpse of Porto Santo had been descried at four o'clock, some birds came in sight, those harbingers from land, which Spix and Martius also noticed in the proximity of Madeira. The wind, which since our departure from Cadiz had blown almost continually from the west and north, shifted yesterday after a short calm to the north-east, and favoured our course throughout this day and in the clear starlight night.

July 30th.—This morning my first glance fell on the long-extended, rugged and rocky islands of the Desertas, which, just illumined by the early rays of the sun, were clothed in the most splendid, rosy colour, on the Frigate's starboard side, like a reef rising out of the dark-blue ocean. Behind them was seen the misty, blue outline of Madeira, like a long, gently rounded mountain with a jagged summit, which appeared to move gradually from right to left behind the Desertas. At five o'clock we took the bearings of these islands in N.W. at a distance of about three nautical miles from land. As the sun rose, the lovely red colour diffused over these rocks disappeared, and was changed into that peculiar deep-red which remarkably characterizes these islands.

Let the reader imagine two long, colossal rubies, with a smaller one attached, lying in a line from south to north, in the sapphire bowl of the ocean, and he will have a picture of the Desertas, as it appears to the winged tenants of the air in their flight from our cold climes to the fields of Hesperia.

Bogia (Bujio), the southernmost of these islands, has a great resemblance on all sides to Capri, and changes its form as frequently, only that it appears more elongated. Both have that peculiar depression in the middle of their upper contour, which distinguishes Capri at first sight in the entrance of the Bay of Naples. A channel, from sixty to three hundred fathoms deep and one to one and a half nautical miles wide, separates Bogia from the largest of the three Desertas. Although free from rocks and shallows, this passage is dangerous, as the high northern shore takes the wind from the ships. The largest island forms a long, sharp ridge, which extends, with a slight irregularity of outline, in a perfectly straight line. Separated by a second but narrower channel, the small flat island of Ilheo Chaõ rises in a line with the two others, like a tabulated rock, just above the surface of the sea. North of this, and consequently to the right, we saw distinctly from the deck the appearance of a ship, which seemed to be steering towards us: she did not move, but this was not surprising in the calm that prevailed.

A few minutes afterwards I was sitting in the splendid and spacious cabin in the stern of the Frigate, and consulting my Horsburgh—that seaman's oracle—about

the Desertas,—and what did I find there? that this imagined ship was nothing else than a pyramidical rock, which many a one before had in like manner mistaken for a vessel under sail.

The whole extent of the Desertas amounts, according to James Wyld's map, to eight and a fourth nautical miles. Madeira, with its rounded, gently ascending hill, now rose above the channel between the two chief islands; at seven o'clock it lay behind Bogia, and in an hour afterwards it was entirely separated on the left from the Desertas. The faint land breeze, which, breaking the calm, rose at times from the W.N.W., rather impeded the progress of the 'San Michele,' than favoured her voyage to Funchal; Captain d'Arcollière therefore proposed an excursion to Bogia, in the hope of a rich booty of birds and fishes, whilst the Frigate should double the southern point of the island and take us on board again on the other side We gladly acceded to this proposal; and presently the silver whistle sounded, and the boatswain's call was heard, "Arma il terzo canotto!" The third cutter was lowered; fowling-pieces, powder and shot, sketch-books, wine, water, fishing-lines, bread, oranges, cartridges, etc. were stowed in the boat, and the Captain, we three German companions, with Captain Bellegarde of the Regi Navi (the marine infantry), our zoologist, jumped quickly in, without stopping for breakfast. The cutter pushed off, and with a few sturdy strokes of the oar was distanced from our floating abode, and steered for the island, the narrow side of which was now turned toward us. It seemed to

be low water, for in spite of every effort the boat remained stationary, as if fixed by some invisible power. Fortunately we were not pressed for time, as the Frigate also, although all her sails were set, made scarcely any perceptible progress on her wide, circuitous course round Bogia.

I had thus leisure to amuse myself with speculating on the strange red colour of the islands; this puzzled me not a little, and I at first attributed the cause to flowers or mosses, with which I fancied they might be covered. Our boat rowed and rowed, but yet we approached no nearer to the land, the narrow side of which, facing us, looked like a rock cleft in numerous places. Numbers of birds, chiefly seagulls, now came flying over the cutter and far over the island, or dropped gently down and sat rocked on the long waves. Count Bismark shot a petrel; several white sea-swallows also, with bright-red beaks and feet, fell under the vigorous fire of our guns, while every one pressed forwards jumping from seat to seat to take aim. Enveloped in a cloud of smoke we approached the rocky coast. At last—at last we came under the high rocks of the Desertas. What a sight! what a picture of volcanic power and activity, of volcanic upheaving and elevation! From what fearful, submarine, fiery abyss, from what cleft in the earth's crust, have these burnt-out lava-reefs arisen, which stand before us stiff and rugged, as if just cooled, and burnt so red that they appear to be still red-hot? Thus then was the riddle of the colour at length explained. In several places the rock rose perpendicularly, in crimson or ver-

milion walls of lava, the colour of which reminded me forcibly of the fiery-looking masses of lava found here and there under the crater of Ætna. On these bright red walls rested, but without any regularity, darker or black horizontal strata, which in turn were again often separated by isolated stripes of an orange-coloured, earthy mass. In other places the walls of rock were black down to their base; they here consisted of a multitude of black grains, which appeared to us like sand, similar to those orange layers. The rock was often merely a hollow crust of scoria, the upper surface of which had in parts fallen in; and through the holes thus caused the daylight forced its way from above into the caverns, while at the same time the sea entered from below. But not only at the foot of the rock, high up also where the cleft walls rose into the air, were seen similar red crusts, which seemed to have fallen in; the whole had the appearance of being burnt out and fused, just like the scoria resulting from volcanic action.

In many places narrow, grey veins had risen in these fire-coloured masses, and poured over the surface of the island, forming an immense, thick crust. This hard, grey lava seemed to me the same as that with which Rome and Naples are paved,—so much resembling basalt that the eye cannot tell the difference. I sought for columns, and found some of the grey veins cleft almost in a columnar manner; the regularity of their sides alone was wanting. Large grey blocks of basalt or lava with bands of olivine were strewn over the coast, on some of

which I fancied that I could discover traces of a black, scoriaceous covering.

Scarcely were our boat's crew landed, when this volcanic waste began to spring to life in various ways; every one found some occupation. Armed with a knife, the sailors were busy pursuing various sea animals upon the beach,—among others some red shellfish, called in Italian *granchi*, which ran quickly away, and small, black, prickly *chatons de mer*,—whilst some of our party roamed about the shore, and climbed up the clefts in the rocks. Meanwhile others were engaged in shooting sea-swallows or catching fish, shoals of which, of the richest colours, were seen swimming in the clear water at a depth of ten to twenty feet under the boat; there were red and yellow, some very small, others larger fish, darting about and glancing in the most splendid and magic colours. But our chief booty, beside a large species of eel (*Muræna*), was a small lilac fish like a flounder, the fins of which were of a marvellous blue colour with quite a metallic lustre, like the wings of the blue Kolibri in the Berlin Museum. I now left the strand, and climbed up a steep ravine over loose stones and boulders, in the hope of reaching the summit of the rocky island, around which the seagulls swarmed. Suddenly the report of shots, fired at some seals, called me down again: they unfortunately missed, and only frightened away the animals, so that I was disappointed of a near view of them. I however saw the black fins of a shark, that sworn enemy of man, rising out of the sea. When this fish follows a ship, it is said to bring death to

any one who is ill on board: as we were entering Cadiz, the sailors said they had seen a shark, and before we left the harbour one of the men who was sick died: this circumstance failed not to produce an impression on the superstitious crew. At least a dozen sharks were seen, in quick succession, but only their dorsal fins appeared above the water. Our shots made them every time dive down, but did not seem to hurt them. After following them for some time backwards and forwards in our boat, we were rowing to the Frigate, when suddenly a cry was heard: there was a general silence. A second cry!—all listened breathless. I could no longer resist the impulse, and instantly answered with a discharge of both barrels of my fowling-piece. No one was missing in our boat,—the crew were counted and behold, "*es fehlte kein theures Haupt!*" The sailors maintained that the cries came from the seals, but we soon distinctly recognized a human voice. Expecting to be called upon to save from certain death some frightful-looking, half-starved Robinson Crusoe, we turned the boat and rowed back to shore. With my glass I peered into every cleft and cranny in the rock, but in vain. At length I descried what appeared to be a man —presently two more—down in a remote cavern on the shore; by degrees however we convinced ourselves that these were nothing but two white rocks. Again we heard the call! what unhappy mortal might be cast on this desert island—what chance could have brought him here?

Bogia had again changed its form; a rocky pyramid

rose upon the island on the left, like that of Capri, which we had so often seen, and the reflection from the high rocks now tinged the sea again blood-red. All at once we observed two sheep, walking along the edge of this precipice, and presently a third, and then two men clad in white seated in a cavern at the very top of the rock: we saw that they were shepherds; but why had they called to us—was it only out of sport, or did they imagine we had stolen one of their sheep? Thus ended our amusing Robinsonade, and we rowed quietly back to the Frigate. I wondered how the sheep could fatten here, for we found scarcely any trace of vegetation in the island, except a few handfuls of *herba glaciata**, and some small white flowers.

As we approached the Frigate, which was lying perfectly motionless, Count Oriolla jumped into the sea, in spite of the sharks, and swam to the ship. We had presently an excellent feast off the rich booty of fish, the produce of our day's sport. At sunset the Desertas lay behind us, and Madeira to the north; at noon the Frigate had been in 32° 19′ 2″ north latitude and 16° 29′ 25″ longitude west of Greenwich. We spent the noon on shore, where the heat was considerable, but not so

* *Herba glaciata* is the *Mesembryanthemum crystallinum*. According to Broussonet, the Guanches used the seeds of this plant, bruised, as a substitute for flour. In Spain, where the plant is known by the name of *Barilla Moradena*, it is pretty largely cultivated, for the sake of the alkali which is extracted from it and used in the glass-houses. The export of the ashes of this plant, produced in the Canary Islands, amounted, according to the same authority, to the value of 600,000 francs.

oppressive as in Spain and Italy. The night was wonderfully fine, a glorious starlight night. Through the port-holes of my cabin I observed the Cassiopeja low on the horizon, and discerned the long line of Madeira in the misty distance. Single stars were reflected in the sea, the smooth surface of which—for not a breeze stirred —was from time to time strongly illumined. It is remarkable, that calms are so frequent in the vicinity of this group of islands, although, as Horsburgh correctly observes, every morning the clouds are seen towering above Madeira, which bring the land-wind, but carry it only three or four miles out to sea, so that it did not reach us. These calms were the reason why our Captain kept to the south of the Desertas, for in the channel between these islands and Madeira, the calms, together with the prevailing currents near shore, might easily prove dangerous,—the more so, as there is no anchorage under the perpendicular rock at the Cabo do Garagão, (Brazen Head, i. e. of the seabird) nor in many other places on the coast.

July 31*st*.—This morning Mass was performed, and the weather was so fine that we spent the forenoon in nearly the same place as the day before, and found ourselves at noon still in 32° 5′ 15″ north latitude, and 16° 39′ 36″ west longitude. It was not until between four and five o'clock that the land-wind reached us, against which we now tacked. Madeira gradually became more distinct; and the ravines, indentions, and valleys in the mountains were soon visible. We had the day before seen single houses on the mountains, which now

increased in number, and before sunset Funchal was distinguishable.

August 1st.—Very early this morning the Frigate steered straight to the anchorage off Funchal. At about seven o'clock the topsails were taken in, the lead was cast, and all was in readiness to let go the anchor. The wind suddenly dropped; the 'San Michele' had reached the limit between the faint sea-breeze and the land-wind, and was now at the point where the two counteract one another, which rendered it perpetually necessary to brace about. The Captain of the Portuguese eight-gun schooner 'Esperanza,' and the Sardinian and Prussian Consuls meanwhile came on board. At half-past nine o'clock, a favourable gust of wind carried us straight to the desired anchorage, which the Portuguese Captain had pointed out to us, where, with the citadel to the west of the Loo Rock, we dropped the starboard anchor in forty-four fathoms*. We had now time to survey this paradise of an island from the roadstead, for I did not expect until twelve o'clock the military and civil Governors of the island, who had politely sent word of their intention to pay me a visit. The chain of mountains before us had quite the character of those of Genoa and the maritime alps at Villefranche and Ventimiglia; the picturesque forms of the mountains, the sharp outlines, the numerous defiles, water-clefts and little valleys, which in parts descend precipitously to the shore,—all reminded me of the charming acclivities of the Riviera,

* Compare James Horsburgh's India Directory, vol. 1. pp. 8, 9.

with only this difference, that the fresh verdure here reached almost to the rugged summits.

At the foot of the mountains, partly on the acclivity, and commanded by its citadel the Forte do Pico, which looks down upon the town from a steep height on the north-west, lies the pretty, clean town of Funchal, extending far along the shore of the level, sweeping bay. Funchal is distinguished by the great verdure between its pointed, northern roofs, among which we here and there discerned with the telescope a black cypress, the crown of an isolated palm, or (a sight which was new to us) the bright green gigantic leaves of the banana, by the side of the red arborescent oleander. Small detached white houses are seen on the acclivity of the hills, looking like innumerable bright specks; while high above all, as if perched on the top of a pyramid, stands the small white church of Nossa Senhora do Monte at the limit of the verdure, with its two towers, on the narrow, arched ridge between two steep ravines. From the centre of the town below rises the dark, square tower of the cathedral, with a pointed spire; whilst the large, white Government-house is easily distinguished among the dwellings on the shore by the little tower which projects from the midst of the wall, not so high as the roof. At a short distance stands a tall, slender, cylindrical tower, the prosaic use of which, as a crane, it is not easy to guess. On the west side of the town the black Loo Rock (Forte do Ilheo) standing in the sea, with the battery upon it, is detached from the short

precipice which terminates the gently sloping green hills and rounded summits on the left above Funchal toward the sea. On this precipice of the Ponta da Cruz are distinctly seen the rib-formed basaltic columns. Still further west, beyond this Cape, rises perpendicularly the dark colossal wall of the Ponta do Sol, with which the ridge of the high mountain-chain of Madeira plunges abruptly into the ocean: in the same manner the lofty, wooded mountain on the right of Funchal sinks perpendicularly to the sea. Here also appears the red rock, which descends into the sea in terraces under the name of the Cabo do Garagão. The coast-defences of Funchal begin with a battery of a few guns west of the detached Forte do Ilheo; and in all, not including the Loo Rock, we saw through the telescope five coast-batteries, which terminate at the east end of the town with the Forte S. Jago, consisting of three terraces.

After the visit of the two Governors I went on shore to return the compliment. Notwithstanding the wish I had expressed to preserve my incognito, and although the Prussian flag was not hoisted, the Portuguese schooner manned her yards, and fired a salute simultaneously with the Loo Rock battery. A number of people had gathered on the shore, and accompanied me to the bastioned entrance of the Government-building, where the sentry stood under arms. The two gentlemen came to meet me and conducted me through the saloon, in which were hung the portraits of their predecessors in office—from the first governor, Zarco—into a cool apartment, in which hung a picture of the Queen.

Who, at the mention of Zarco's name, does not recall to mind the discovery of Madeira, which, it is well known, occurred in the palmy days of Portugal, when Don Henrique from his villa on Cape San Vincent directed the transatlantic expeditions of his country, and spent a great part of his income as Grand Master of the Order of Christ in promoting those voyages of discovery which proved so advantageous to science? The Infante first turned his glance to the west coast of Africa, and, after many attempts, his countrymen succeeded in rounding the dreaded Cabo de Não; they then sailed south as far as Cape Bojador, which was for a long time the limit of navigation. Two gentlemen of the Prince's suite offered to undertake the bold attempt to circumnavigate the dreaded promontory; these were João Gonsalvez Zarco and Tristão Vaz Texeira, who had before distinguished themselves in the eyes of the Prince at the taking of Ceuta, the former having been knighted on the spot by the Infante himself. In the year 1418 they set out on their expedition, but did not reach the coast of Africa, being cast by a violent storm upon an unknown island, which, out of gratitude for their deliverance, they named Porto Santo. Here they settled, and desisted from prosecuting their projects further. Don Henrique, full of joy at the discovery of this fertile and well-watered island, immediately despatched colonists thither. For a long while a cloudlike form on the distant horizon of the sea, which never changed its position, had engaged Zarco's and Texeira's attention: they one day sailed in that direction, and found a larger,

wooded, uninhabited island, on which they landed at the Camara dos Lobos, July the 8th, 1419, and which they named Madeira, from the abundance of wood upon it.

The island was subsequently divided by the Infante into two Capitanias, the Camara dos Lobos and Machico, which were respectively placed under the government of the two discoverers. João Gonsalvez Zarco together with his family took the name of Da Camara, after his Capitania, the Camara dos Lobos, and founded Funchal. The thickness of the woods greatly impeded his settlement, and he consequently set fire to some forests in the neighbourhood of Funchal. The fire spread, and lasted for seven years, consuming nearly all the wood on the island; but the ashes fertilized the soil: the corn at first bore sixty-fold, and the wood that was spared by the fire, which was of a superior kind, supplied Portugal and many other countries. Don Henrique transplanted the sugar-cane from Sicily, and vines from Cyprus, to Madeira, and both flourished well. When king Duarte ascended the throne, he presented his brother, the Infante (September the 26th, 1433), with the islands of Madeira, Porto Santo and Desertas, for the services he had rendered to his country. Ever since that time Madeira has remained in the undisputed possession of the Crown of Portugal, and is one of her finest dependencies. Only in the year 1835 the English for a short time seized the island, to exact some arrears of subsidy from Portugal.

The present Military Governor is Colonel Noronha, who, if I mistake not, commands the Eleventh Battalion

of the Line quartered here. The Civil Governor, who, like his colleague, has the title of Excellency, is Dr. Correa, formerly a barrister. They both showed me the most courteous attention.

A crowd of people accompanied me to the house of Mr. Hasche, a Hamburgher, who at this time exercised the functions of Prussian Consul. We had arranged a rendezvous here with some of the officers of the Frigate, to make an excursion on horseback to the church of Nossa Senhora do Monte.

The path ascends boldly between walls up the steep acclivity, at the top of which was seen the small white church. Illumined by the noonday sun it glitters like a bright star on the edge of the forest, looking down on the peaceful and smiling valley, the green vine-clad hills, the pergolas and vine-roofs which shade the acclivity,—on the lovely little gardens at the foot of the ascent, which with tropical luxuriance are interspersed among the fresh green of the vines, and the numerous country-houses, the charming Quintas, white as the purest snow—on the villa of many a rich Englishman, beside which the fan of a pine-tree unfolded by the sea-breeze or the dark cypress rises in solemn beauty—lastly on the lovely Funchal, skirting the mountain's base, and seeming to bathe in the waves of the azure ocean, in which the glowing heaven of the south is mirrored.

But what is it that attracts the eye so magically, looking as strange as a picture in a dream? it is the luxuriance of the bananas, which grow by the roadside and impart a peculiar charm to this country. They stand in

groups close together, the representatives of the gigantic vegetation of the tropics,—like strangers, which far from their native clime cling to one another with a brotherly attachment. Their large shield-like leaves form an immense green roof, which casts a deep shadow on the ground. But these shadows move—the leaves rustle in the fresh wind from the sea, which fans the air with a refreshing coolness.

Sometimes the walls at our side, which never impede the open view, are succeeded by hedges; and what hedges! hedges of roses, fuchsias, and the sweet-smelling heliotrope! If here and there brambles are seen mingling with these plants, the eye is richly recompensed by the splendid arborescent oleanders which grow by the roadside with a beauty I had never before seen. Occasionally the white bell of the lovely Datura hangs like a dewdrop among the tendrils, or bends gracefully down on the passer-by; and some of our party even discovered the passion-flower in this magnificent display of bloom.

At every step as we ascended, the view increased in beauty, and the mountain-path in steepness. We gave our poneys the rein, and they climbed briskly up the hill, although sometimes their hind-feet slipped on the smooth lava-pavement. Two tall dragon-trees stood before us, and numerous blue Hortensias hard by raised their globe-shaped heads at the entrance of the shady garden of the English Consul. We rode past, and entered a wood of chestnuts, walnuts and maples, in the cool, refreshing shade of which, enjoying the sea-

breeze and listening to the murmuring brook, we fancied ourselves transported back to our dear Germany. Suddenly we stopped at the little church of Nossa Senhora do Monte, and hastening up the wide flight of steps to the terrace we looked around—what a glorious view! The eye wanders down the lovely declivity to the town and the wide bay, lying at a depth of 1774 feet beneath, into which the Loo Rock seems as it were dropped. Then raising our eyes to the distant sea-horizon, we caught a faint glimpse of the Desertas.

Leaving the small and modest church, to which the English have given the name of the "Mount Church," we returned to the pleasant cool of the adjacent wood, and in a few minutes came to the paradise of a garden belonging to Mr. J. D. Webster Gordon, a rich merchant and head of one of the first commercial houses in Funchal. As soon as we passed the slight fence which parts the garden from the skirts of the wood, the neat, well-kept footpath announced the near residence of the Englishman, whose care and attention are visible even in the smallest detail. Mr. Gordon's sons joined our party, and their young tutor, Mr. Andrew Picken, was our guide. The splendid flower-garden, containing a rich collection of rare exotics, surrounded us. Trees from all parts of the world enclosed the "greens," enlivening the view on every side, or rose among them in picturesque groups. Europe had contributed her silver-leaved fir and oaks, New Holland an abundance of large Banksias, nor was America behind the rest: the flora of every country had here its worthy representatives,

forming the frame to the noble prospect, which does not yield in beauty to that of Mount-Church. Mrs. Gordon received us with great politeness in her comfortable country-seat, the charming "Mount-house," and placed before us some of the excellent fruits of her garden, with wine and water. She showed us a beautiful work on Madeira, which Mr. Picken had published, and dedicated to her as an acknowledgment of the kindness he had met with in her house. Mr. Picken had arrived in Madeira four years before, dangerously ill with consumption, this island having for many years been an asylum, especially in winter, for English persons suffering from chest affections, who seek restoration in its soft and equable climate. The average number of these invalids who reside here is stated variously at between four and eight hundred. In the case of this young and clever artist the hope of recovery was soon fulfilled, so that he was able to undertake the instruction of the children in the family, and to make the sketches which he afterwards himself transferred to stone with a masterly hand.

On our return to Funchal we found an excellent repast prepared in the house of our Consul, in which there was no lack of either the dry Madeira or Malvasia of the island. Herr Hasche also placed before us some bananas, the first I had ever eaten; I did not at all like them; a person must become accustomed to this fruit, to acquire a relish for it. After dinner we took a second ride to the wooded hill on the east side of the town, passing through the whole length of Funchal. The architecture

of the houses is very different from that of the towns in Spain, and reminded me of the views of Rio de Janeiro, which the Consul-General M. Theremin has published. The roofs are pointed, and the balconies, although frequent, appear to be rather unnecessary. The pavement of the streets consists, as in Ceuta, of small stones laid in arabesque patterns in front of the house-doors: great cleanliness is everywhere observed. In some parts, as in Messina, dried-up mountain streams intersect the town, which is encompassed by shady avenues, chiefly of maples.

The dress of the inhabitants of Madeira is extremely simple. The men go about in their shirt-sleeves, cloth waistcoats and linen trowsers; on the crown of their head is stuck a comical little cap of dark-blue cloth, the top of which, not unlike a rat's tail, sticks up in a tuft several inches tall, giving to the whole an almost Chinese appearance. In addition to the same little cap, the women wear a large pelerine of dark-blue or scarlet cloth. The country-people have generally dark-brown, knitted caps. The countenances of the inhabitants of Madeira are not very prepossessing, on account of their high cheek-bones,—a defect which the women share, who have also large lips; they cannot compare in beauty with the women of Spain*.

* The island of Madeira is seven and a half German miles long, and about three German (twelve English) miles wide, and upon an area of sixteen and a half square miles (according to the Weimar Almanack of 1844) had 116,200 inhabitants, of whom 15,200 belong to Funchal, according to a statement of the year 1836. In the same year Porto Santo had about 1600 inhabitants.

Although mendicity is almost as prevalent here as in Italy, the extraordinary courtesy of the inhabitants produces a favourable impression. On meeting any one they pull off their cap in a polite manner, and indeed this attention is carried so far, that if an inhabitant meets a stranger on foot, whether master or servant, he immediately offers him his horse: one might imagine that the courtesy of former times had retreated gradually into this remote corner of Europe.

The only strangers we met this afternoon were some English invalids, coming down from the hills. The effects of the great intercourse with England are visible in everything: the food and drink are quite English, and the English language is known by nearly all classes of the inhabitants. Even the cut of the garrison uniforms recalls that of the British troops; the uniform of the Eleventh Battalion of the Line is dark-blue with yellow collars, and the Artillery dark-blue turned up with red: indeed the whole of the Portuguese Infantry have red collars and facings.

Our horses carried us quickly up the hill, as we were obliged to ride fast, to reach the object of our excursion in daylight. An islander armed with a long iron-shod pole ran panting by the side of each hack-horse, occasionally hanging on the tail of the animal, to be dragged along. Although these people have astonishing perseverance and enviable lungs, of which our guides today gave ample proof, yet where this practice prevails, it costs an effort to get into a quicker pace. But the steeds of our cavalcade, which came from all quar-

ters of the globe, presented even a livelier picture than their sweltering conductors. Count Bismark managed a spirited bay horse, Count Viry was mounted on a pretty English chestnut, and another of our party was pulling away at the lank jaws of a strong grey horse from New York, without effecting any perceptible slackening of its pace, whilst my Seville stick figured away upon the hind-quarters of a Spanish pony, which, vying laboriously with his high-boned companions, bore me ever and anon triumphantly past them. As we followed the steep path up the hill, the view around was open and extensive, Funchal and the roadstead forming a wonderfully fine picture.

The region of the bananas soon ceased, and the vine, aloe and cactus succeeded: the two last attain a greater height in Sicily, and the aloes are said not to blossom here; indeed we did not see in Madeira a single specimen of their large flowering-stalks. A beautiful Yucca attracted our notice by the roadside, rising high into the air from a short thick stem, with an enormous flower-stalk; and deep below, at the extremity of the town, grows a Brazilian pine. Here and there were seen the sugar-cane, which formerly constituted an important article of commerce in Madeira, and the coffee-plant.

After a hard ride of about an hour we reached the wooded back of the mountain, a branch of the principal range of the island, running out toward the sea. Here, in the midst of perfectly German woods of firs, beeches, oaks, chestnuts, and maples, which thrive vigorously at about the same height as the Mount-

Church, lies the Palheiro, the object of our excursion, the park of Don João da Camara, a descendant of the celebrated Zarco. From this mountain we looked down upon Funchal, lying at our feet, with the Loo Rock in front. Close behind I perceived a second, smaller rock rising from the sea, and connected with the shore by a kind of mole, forming a small haven, which greatly facilitates the landing in boats.

In the roadstead we recognized our Frigate, in the last gleam of twilight. The other view of the sea to the east, over a wooded valley, was interrupted by the sudden coming-on of darkness. Our ride down to Funchal in the cool of the evening was truly romantic, the lights glimmering high up on the dark hill-side like innumerable glowworms. At the summit, as we began to descend, the air was so cool that we were obliged, as in our northern climes, to button up our coats, but on proceeding lower it became milder and more tropical. Here and there a peaceful islander was standing in the open doorway of his house, playing on a guitar. At nine o'clock we reached the shore and the boat of the Frigate: the sea was luminous as we returned on board, and the lights on the hills, seen from the roadstead, looked almost more picturesque than from the land.

August 2nd.—This day was devoted to an excursion to the Curral das Freiras, a deep hollow among the rocks, situated to the north-west of Funchal, nearly in the middle of the volcanic mountain-chain which runs the length of the island. On the opposite, north-east margin

of this crater-like ravine rises the Pico Ruivo, which is not visible from Funchal,—the highest mountain in Madeira according to Bowdich's measurement,—5788 feet above the sea; whilst Pico Arriero, east of it, rises to a height of 5110 feet*. Following the general advice I had relinquished the ascent of the Pico Ruivo, which would have occupied much time and not rewarded us

* Von Spix and Von Martius state the height of the Pico Ruivo to be only 5250 feet. For comparison, I subjoin the heights of some of the principal volcanos of the various groups of islands in the Atlantic Ocean, as given in Von Buch's work on the Canary Islands:—

Canary Islands. (Von Buch, pp. 102, 103).

Pico de Teyde, in Teneriffe	11,206	feet.
Pico de los Muchachos, in Palma	7234	,.
Pico de las Nieves, in Grand Canaria	5842	„

Islands of the South Atlantic Ocean. (Von Buch, pp. 343 to 345).

Tristan da Cunha	7000 to 9000	feet.
Green Mountain, in Ascension	2646 „ 2694	„
Diana Peak, in St. Helena	2534	„

The Azores. (Von Buch, pp. 336, 341).

Pico, in Pico; according to Tofiño (Von Humboldt, Relat. i. 93.)	7561	feet.
„ „ according to Ferrer	6588	„
Pico de Vara, in St. Michael	5000	„

Cape Verd Islands.

Volcano of Fuego	7400	feet.
Pico San-Antonio, in S. Jago	6950	„

The Antilles. (Von Buch, pp. 402 to 405).

Dominica	5700	feet.
La Soufrière, in Guadeloupe	5100	„
Morne-Garou, in St. Vincent	4740	„
Montagne Pelée, in Martinique	4416	„
Mount Misery, in St. Kitt's	3483	„
St. Lucia	1800	„

for the toil, and resolved instead to make an excursion to the Curral, which was greatly extolled. Favoured by the most splendid weather, we started at an early hour.

It was a fine fresh morning when we mounted our horses at the landing-place, rode through the town, and following the route under the Forte do Pico soon reached the open country. We had here an extremely picturesque view of Funchal, with the fort in the foreground. The vegetation on this west side is equally rich as on the other, but the land is capable of better cultivation. The small white houses scattered on the green hills, interspersed with straw-thatched cottages, attracted our notice. What a paradise is this island of Madeira, where the genial and equable climate fosters the richest vegetation of every zone on its volcanic soil,—where on the shores of the dark-blue ocean, a mild tropical air, tempered by the sea-breezes, prevails, acquiring fresh coolness at every additional hundred feet of elevation, until under the shades of these German woods we breathe the bracing air of the North, invigorating both to mind and body! Refreshed and animated by the home-recalling impression of the objects around us, we looked down upon bananas, palm-trees, cactuses, agaves and oleanders, whilst luxuriant vines climbed up to our feet on the rugged and fertile acclivities of the lava. The mean temperature of Funchal is stated by Leopold von Buch to be 16°,40 R.*:

* According to recent observations only 15°,0 R., whilst the mean temperature of winter is 13°,0, and that of summer 16°,9 R. See Humboldt's Central Asia, in German by W. Mahlmann, vol. 3.

the winter here is said to be warmer than in Italy, and the summer cooler than in London.

After passing the first rows of hills, at the back of the Pico da Cruz, the traveller arrives near Camara dos Lobos at the deep valley of Ribeira dos Soccorridos, one of those dried-up mountain-streams, the rugged bed of which is hollowed out in the sides of the mountain, forming a precipitous defile. On our ride down to the new stone bridge, which boldly arches the abyss, we had a view on the right between high walls of rock over the upper, narrow valley, which is closed in the background by black, pointed rocks, whilst on the left the eye follows, in the direction of the sea, the Ribeira dos Soccorridos through the smiling portion of the valley, which is thickly overgrown with vines, tall reeds, yams (one of the chief articles of food in Madeira), and large groups of bananas. At the point where the naked rock is not exposed to view, the sides of the valley are also covered with vines, amongst which one group of bananas had a peculiarly picturesque appearance, looking like an enormous nosegay springing from a high-arched, dark cavern in the rock on the opposite acclivity. The fresh green of the colossal leaves, which grow in wild but graceful luxuriance, contrasted remarkably with the dark, heavy, over-hanging roof.

Immediately after passing the bridge, we ascended on the other side the heights of the Estreito, where the paved road is bordered by small villages. The people crowded on the balconies, at the windows, and under the vineroofs, full of curiosity to see our caravan. All

around Funchal, as far as this spot, are seen wells and fountains beautifully enclosed, which offer refreshment to the traveller. On reaching the edge of the chestnut wood the road narrowed to a rough footpath, and between the shadows of the trees we saw before us a rising ground. Hardly had we ascended this, when we looked straight down into an abyss, a large crater-like chaldron, green and rugged, lovely and yet fearful, like a beautiful Swiss valley. This is the Curral! On the opposite side, near the rocky projection, stands a nunnery upon a green sward.

We breakfasted on the wooded slope, drank to my brother's health, in honour of his birthday, and then rode back to Funchal. Rain-clouds had driven us from the edge of the majestic abyss, out of which issues the Ribeira dos Soccorridos; but soon again the blue sky appeared in unclouded serenity overhead, and the coast stretched in all its loveliness at our feet.

At noon the roadstead was enlivened by the arrival of two small British cruisers. Shortly before we sat down to dinner in the 'San Michele,' the eighteen-gun corvette the 'Satellite' anchored close beside us; her destination was the Pacific: and hardly was the cloth removed, when the thunder of cannon announced the arrival of the sixteen-gun brig the 'Albatros,' which had on board eighty men above her complement, and among them a troop of fourteen "youngsters," who were on their way to the West Indies, to be transferred to other ships of the squadron stationed there.

August 3rd.—A visit on board the 'Satellite,' and an

excellent luncheon with Captain Fitzgerald Gambier, filled up the forenoon pleasantly enough. The polite proposal of this officer to accompany me with his corvette to Rio was gladly accepted,—a fresh instance of the great courtesy which I have everywhere experienced on my travels from the officers of the British navy. In the afternoon a third English man-of-war joined those already anchored in the roadstead,—the 'Cleopatra' of twenty-six guns, which was to convey the new Governor, General Sir William Gomm, to the Mauritius, and was likewise to touch at Rio. I must also mention a French war-steamer, carrying a large collection of wild beasts from Senegal to France, which we found on our arrival. Thus there were six men-of-war and only four merchantmen in the roadstead of Funchal,—a disproportion seldom seen, and a proof how almost all the courses to the various fleet stations here cross one another.

Towards evening I went on shore, on the east side of the town, and met two palanquins with women and children: these conveyances have the form of a cradle without wheels, and are provided with curtains. Carriages are unknown here; for transport the people use small wooden sledges, drawn by oxen, which glide admirably over the small paved stones. Returning on board I found the deck of the 'San Michele' quite transformed; a party of gentlemen and ladies from Funchal were assembled at a ball *à l'improviste*, which, it must be confessed, could not compare with the splendid entertainment Admiral Count Viry had given me on board the Frigate before our departure from Genoa, when the spacious

deck was adorned with flags and lamps, surpassing many ballrooms in splendour, and certainly all in its peculiar and romantic charm. The dance was at its height, and a general animation prevailed, in spite of the confusion of tongues. We were able to converse with most of the fair islanders (an epithet to which few of these ladies have properly a claim) in English, French or Italian; some understood only our smattering of Spanish, others not even that; nevertheless they were very well content, if their partners only waltzed well, rounded the capstern cleverly, and were successful in the figures of the quadrille. With the harmonious sounds of our music was mingled the rattling of the heavy chains of a large East Indiaman, which after her long voyage dropped anchor in the night beside the 'Cleopatra.' At half-past ten the fleet of boats, which were to land the party of guests, pushed off from the Frigate.

August 4th.—The Lisbon Packet, for which we had waited here several days, arrived in the past night, but brought us no letters; we therefore left the bay of Funchal today. Notwithstanding the good anchorage, which affords ample shelter, especially during the prevalence of the north-east wind in the summer months, the roadstead is exposed to violent storms from the south-east and south-west. These dangerous winds prevail from November till the beginning of March, and are most fatal to the shipping off Funchal in the first of these months. A heavy sea usually precedes them, rolling upon the coast, and accompanied by squalls; there is then just time to set sail and get out to sea, in order to

avoid being wrecked in the ensuing storm on the rocks of Madeira.

Our departure was delayed until the afternoon, as two anchors had to be weighed; for in the morning the ship had dragged her starboard anchor, and we had therefore been obliged to let go the port anchor. This doubled the labour of the crew; the best bower anchor too had got foul, the heavy chain was twisted round one of its flukes, and we now heaved it on board crown upwards. A violent squall sweeping down from the cloud-topped mountains on to the valley of Funchal and the roadstead, obliged us to set the jib, for casting; and shooting ahead under this single sail, we bade adieu to the coast of Madeira. The 'Satellite' and 'Albatros' followed our example. The squall subsided as suddenly as it had come on: a light variable wind succeeded, until at length we caught the north-east wind, and could steer our course. Under reefed topsails and courses we waited for our new companion the 'Satellite;' whilst the brig, soon changing her course, sailed for Bermuda and the West Indies.

A dark, towering cloud lay heavily upon Madeira. The walls of rock on the east and west of Funchal rose more and more gigantic to the clouds, until the whole island gradually disappeared in the mist.

THE PEAK OF TENERIFFE.

August 5th.—Scarcely twenty-four hours had passed since the island of Madeira disappeared from sight, when, on the evening of the 5th of August we had an intimation of our approach to the mountains of Teneriffe. In the morning, after steering past the Pitons and Salvages, at a distance of nineteen nautical miles, without seeing them, we found ourselves at noon in 29° 33′ north latitude, and 16° 23′ 36″ west longitude. The crew of the 'San Michele,' I may observe, had enjoyed great sport this morning from a good haul of Scomber-fish. Shortly before six o'clock a slightly darkened appearance was observed under the white clouds, and toward this point we steered. By the aid of the telescope I could dimly distinguish the outline of a mountain descending from the clouds to the level of the sea. The light north-east wind, which had hitherto carried us along, now dropped; the sails hung to the mast, and the Frigate rolled more than usual: the sea was luminous.

August 6th.—Early this morning the mountain, which had been yesterday only dimly visible, stood off in dark relief against the fog; and soon afterwards a second declivity was seen, descending to the sea west of the other.

The mountains of Teneriffe, their tops covered with clouds, were now in sight: a warm, brownish vapour lay spread out upon the grand rocky chain, the forms of which became gradually more distinct, and upon the clouds towering high above them, which seemed to form a single, compact mass with the steep range on which they rested, rising from the waves. We approached the coast near Punta de Anaga (Punta di Naga), the north-eastern point of the island. Not far off a pyramidal rock (La Mancha according to Von Buch's map) rose out of the sea, whilst two of the three Rocas de Anaga came in sight behind it. At the same time we observed a single white house high up on the mountains, which I soon recognized to be the Vigie of Atalaya. The mountain on which it stands commences on the north-east of the plain of Laguna, and is distinguished, as Von Buch observes, by its grotesque forms. This is especially true in its south and south-eastern acclivities, between Atalaya and La Santa Cruz.

It is impossible to imagine more fantastic forms than nature here presents,—the most extraordinary conical mountains, pointed and indented ridges, separating the deep ravines which run parallel to one another and descend into the sea. The banana-grove at the

mouth of the valley of Igueste did not escape my notice, —it was well known to me, from the valuable work on the Canary Isles by our celebrated fellow-countryman Von Buch, as a representative of the vegetation of the East Indies. This grove appeared only a small green spot, but through the telescope we could clearly discern the gigantic leaves of the bananas. We soon also perceived San Andrea, at the entrance of one of these defiles, shaded by a few bananas and defended by a little fortified tower. Leaving this town on our starboard beam, as we sailed along the east coast, Santa Cruz came in sight, with its two high towers, forts, and flat roofs, —a perfectly Spanish town.

The sharp ridge of Teneriffe, the Cumbra, was still veiled in mist, a heavy mass of clouds resting upon it and darkening the horizon; when suddenly a white pyramid broke through these masses, towering one above another, and high above, from his sublime and dusky castle in the clouds, the upper cone of the colossal Pic de Teyde looked down upon us proudly and majestically,—that gigantic volcano rising from the ocean, which breaks the force of the trade-winds and turns them from their course. On the left of the Peak, a small portion of the Circus stood forth above the clouds like a black ridge.

This glorious spectacle lasted only for a moment,— in an instant it vanished. Santa Cruz was seen more distinctly. We took in the top-gallant-sails, spanker, and jib, and after awhile the topsails, and then the anchor was let go in thirty fathoms' water. The anchorage

agreed nearly with Horsburgh's account*; at the same time Captain Fitzgerald Gambier anchored with the English corvette so far seaward, that he was in some fear lest, as the ground was steep, his anchors should not hold.

Santa Cruz, viewed from the roadstead, has an appearance of cleanliness, like all Spanish places. In the verdure close to the town are seen single bananas, whilst beside one of the two chief towers rises a tall slender palm-tree high above the roofs. At a short distance stands the white Government-house, on which waves the Spanish flag, and in front of it lies a battery, abutting on a short Mole. In all I counted five or six batteries or detached works intended for the defence of the coast,—amongst these, a tower and another small closed work on the north side of the town, which is said to have been erected after Lord Nelson's unsuccessful attack. This attempt to land, on the 25th of July, 1797, which failed in spite of the most devoted bravery of the British sailors and soldiers, is historically memorable from the sacrifice of life it occasioned, which was scarcely less than the loss sustained at the battle of St. Vincent shortly before; indeed the number of officers of rank killed and wounded was even greater†. In the first instance, when the Spaniards, descrying the squadron of boats which under shelter of night came rowing within half-gun-range, opened a fire from thirty to forty guns, the

* Horsburgh, India Directory, vol. 1. page 11.

† Compare James' Naval History of Great Britain, etc., vol. 2. page 56.

'Fox' cutter which accompanied the boats was sunk, struck by three cannon-balls (only one *à fleur d'eau*), together with her commander Lieutenant Gibson and ninety-seven men. Admiral Nelson, springing from the boat on shore, was in the act of drawing his sword, when his right arm was shattered. At the taking of the Mole-head Captain Bowen of the 'Terpsichore' fell, together with the first lieutenant of his frigate. After a very obstinate battle, during which the English forced their way up to the Prado, and made a vain attempt on the citadel, Captain Troubridge was obliged to desist from the enterprize: the Spanish Governor however granted him a favourable capitulation, which ensured him a free re-embarkation.

Santa Cruz has no defences on the land-side. Behind the town, toward Laguna, the ground rises gently, and the heights are crowned by some mills. Laguna itself is not discernible from the roadstead, but Nuestra Señora de Gracia lying on the acclivity is seen clearly. The colouring of these slopes is just the warm, parched, brown tint of Malta and Malaga; whilst the oft-mentioned and remarkable mountains on the north-east assume, from the cactus which grows upon them sparely, a darker and greener colour, similar to the mountains in the Highlands of Scotland. On the east, the dazzling white mass of clouds, which since leaving Gibraltar had seemed to me like a harbinger of the vicinity of Africa, concealed Canaria and the other islands. The heat was oppressive,—more so than in Madeira: Reaumur's thermometer stood at + 20° in the shade, in the roadstead.

A few ships lay between us and the strand, and amongst the rest some old, heavy, worn-out "schooner brigs."

As I was going on shore for a few hours in the afternoon, to take a ramble through the town and sketch in the neighbourhood, a number of naked youngsters, who were bathing off the Mole in the black muddy water at low-tide, came wading round our boat. The view from the head of the Mole, (which is only a few yards long) of the mountains on the north-east is very peculiar. The principal streets of the town are clean, but the same cannot be said of the back streets. Most of the houses are one-storied, and have flat roofs; balconies are not so common as in Spain; in their stead, wooden galleries run round some of the houses, which reminded me of the style of building in Switzerland. The dress of the lower class of women is more strange than tasteful: the round man's hat, made of straw or black felt, stuck on to a white, not always clean cloth, which falls down on the shoulders and neck, fails to divest the faces of these women of any of their ugliness. One can easily fancy these rude, quarrelsome creatures the descendants of the old Guanches,—those dwellers in caves whom the first conqueror of the island, Jean de Béthencourt, found here on his arrival in the year 1403*.

* The islands known by the name of the Isles of the Blest, or the Insulæ Fortunatæ, were probably discovered by the Carthaginians in their voyages along the west coast of Africa. They were not known to the Romans until after the time of the destruction of Carthage, and Statius Sebosus, who lived in the time of the Cimbrian war, and was a friend of Lutatius Catulus, gave the first description of them, which now only exists in the imperfect abstract of Pliny. Voyages were

I met here in the streets a sight which I little expected, some half-starved camels with a single hump, as in Von Buch's time they existed only on Lanzerote. The country outside the town has a waste appearance, but in the gardens and close around them grow single palm-trees, plantains, and oleanders in blossom. The cactus seems to be much cultivated here, but it hardly rises above the ground. I noticed a house very picturesquely situated in the midst of cypresses, in a glen among the hills. It began to grow dark when I returned on board: the night was clear and fine, and the stars shone brightly.

frequently made to these islands, and Pertorius was so delighted with the charming accounts given him by sailors, of the place and its fertility, that he was for some time inclined to settle there with his followers. Two islands in particular were designated as "the Fortunate,"—named Convallis and Planaria, now known as the islands of Teneriffe and Canaria,—so called from the large dogs there. King Juba gave a closer description of these islands, which likewise only survives in a poor abridgment of Pliny; he calls Teneriffe *Nivaria*, perhaps from the eternal snows which cover the top of its Peak, but which he does not mention.

In the Middle Ages they were discovered by the Genoese Ugolino Vivaldi and Tedisio Dorio, toward the end of the thirteenth century, and later by Castilian and Portuguese ships. Their inhabitants were known by the name of Guanches, who were celebrated for their civilization. In the year 1344 Pope Clemens VI. granted the Canary Islands to Prince Ludovico de la Cerda, of the race of Alfonso X., who possessed the earldom of Clermont in France, and nominated him their sovereign. He required the Kings of Castille, Portugal and Aragon to aid the Prince to obtain possession of these islands; the only result of which was, that Alfonso XI. ceded to the Prince his right to the islands, who however received no assistance in attaining possession of them. The conquest of them which the Spaniards are said to have effected in the year 1316 can therefore have been only temporary. A conquest by a French adventurer,

August 7th.—It was a splendid morning, the air fresh and cool, and the long lines of the Cumbra were clothed in a light greyish mist: all seemed to promise well for our expedition today through Orotava to the Peak, whose highest, scarcely perceptible summit looked like a small white point rising above the mountain-ridge. We landed as early as half-past six o'clock, and went straight to Richardson's Hotel, where the small party assembled by the fountain in the banana-court. Our party consisted of Count Viry and Lieutenant Mantica of the 'San Michele,' Lieutenant Egerton, Dr. Foster and the little

De Béthencourt from Normandy, in the years 1402, 1405, and 1417, related only to the islands of Lancerote and Fuertaventura.

In the year 1432 the celebrated Infante Henrique of Portugal fitted out a vessel, and committed it to the courtier Gilianes. The latter landed on the Canary Islands, and in various attacks took many of the inhabitants prisoners, but without being able to obtain a permanent footing. It was not until the year 1478 that a powerful force was sent by Spain against these islands, especially against Teneriffe; and after a sanguinary struggle, which lasted until 1497, all the islands were conquered.

The aborigines (Guanches), a fine, powerful and brave race of men, of Berber descent, whose chief place was the charmingly situated town of Orotava on the north coast of Teneriffe, were only reduced by the superior weapons of the Spaniards, as they were unacquainted with the use of iron; and in the seventeenth century they were, principally by the Inquisition, entirely exterminated. Mummies of them, sown up in goatskins, are still occasionally found in caves in the rocks, but they fall to dust when exposed to the air.

It is remarkable that the Pic de Teyde, which the Guanches at the beginning of the fifteenth century regarded as sacred, is not at all mentioned by the ancients. Compare Epitome de la Cronica del Rey D. Juan el Segundo por D. Joseph Martinez de la Puente. —The History of the Discovery and Conquest of the Canary Islands, translated from a Spanish Manuscript lately found in the Island of Palma, by George Glas: London, 1764.

first-class volunteer, Mr. Scowell, of the 'Satellite'. The Doctor had recently accompanied our Sovereign on his voyage to England, as physician of the 'Black Eagle'.

After a short delay, our party pushed on through the still quiet streets of Santa Cruz, to the plain which ascends gradually toward Laguna. Close behind the town the broad paved road crosses the Baranco de los Santos, accompanying it for a short distance. Baranco (pronounced Waranco) here signifies the bed of a mountain-stream hollowed deep into the rock, or a ravine: in this season most of the streams were dried up. The basalt at the bottom of the Baranco de los Santos was clearly visible, washed smooth by the water. The fine road terminates at the lava-stream, which issuing from the cones above Laguna at the end of the Cumbra turns down toward the sea. Our horses and a loaded camel which we met proceeded over this stream with difficulty and caution, although the lava seemed less uneven than that of Vesuvius.

At the commencement of this field of lava stands a mill, and close to it a very small, walled fort, without guns and weakly garrisoned: its object seems to be to serve, in case of the landing of a superior hostile force, as a last shelter on the east side of the island for the defeated garrison of Santa Cruz, and eventually to cover their retreat over the mountains to Orotava. The wide paved road recommences on the opposite side of the lava-stream.

The vegetation improves a little, at least in the Baranco de los Santos, where cactuses and aloes cover

the walls. By the roadside also grow some straight columnar cactuses, but, like the other plants of this genus, they do not attain the usual height. The face of the country grows by degrees more verdant, and the first trees since leaving the gardens of Santa Cruz make their appearance: detached houses stand by the roadside. We passed the church of Nuestra Señora de Gracia, whither the inhabitants of the surrounding farms were wending their way, for it was Sunday: in front were erected some booths; I understood the Arrieros to say that it was the festival of this church. The scenery around became more peculiar; on our right the mountains extended in six or seven successive lines, of grotesque forms and varied colouring, descending in the direction of the sea toward the plain in which Laguna lay; whilst on our left the eruption-cones rose at the end of the Cumbra, the outbreaks of which probably preceded the elevation of the Peak, and may even indicate the spot where it first made an effort to break forth from the bottom of the sea, which however it did not accomplish until at a later period further to the south and west.

We rode into the little town of Laguna, which is situated at a height of 1620 feet above the sea, and has a cheerful and lively aspect: here I was again reminded forcibly of Nebel's views in Mexico, especially that of the market-place. The Sunday costumes are very original; both sexes commonly wear the high, round hat, but today the women had veiled their head and neck in fine, glossy kerchiefs of white or yellow wool, with broad,

white silk trimmings, and were clad in clean, striped dresses. The men seemed to think it cold, although the sun was already high, for they still kept their woollen covering wrapt about them, fastened round the neck with a cord, and worked at the bottom like a blanket with a narrow strip of a darker colour; while others wore long fur jackets or heavy cloaks, some with fur collars. The peasants or Arrieros looked less chilly, and had thrown off their wrappers: their simple dress consists of a white shirt, a parti-coloured waistcoat, generally with red and black stripes, linen trowsers, with one leg stript half way up the thigh, or breeches of various colours slashed on the side in the Spanish fashion. We met some elegant Spanish ladies in black mantillas, on their way to church. The women here are prettier than in Santa Cruz,—a remark which applies especially to the north-west side of Teneriffe. Most of the houses in Laguna consist of one story, with wooden balconies or galleries. I noticed the houseleek growing here and there on some flat roofs, perhaps the remains of those "Sempervivum-roofs" which Von Buch mentions.

We halted on the plain to breakfast, at a short distance from the town. The spot was well-chosen. On one side we had the acclivities of the Cumbra, above which just peeped the summit of the Peak; and on the other side the little town of Laguna, with its tall dark tower, and the long rows of windmills on the right, in the middle of the smooth, flat basin which separates the Cumbra from the mountain-chains in the north-east of the island. Beyond the heights, at the back of Laguna,

was seen the ocean, and lightly traced the beautiful outlines of Gran Canaria. The long rows of windmills are mentioned by Herr von Buch, who observes that they clearly show the change of the north-east trade-wind to the north-west wind in October.

From hence we rode through a barren country, relieved occasionally by green fields of maize, round the acclivities of the Cumbra. Before us on the right lay the ocean, and other parts of the coast of Teneriffe; whilst below, at the end of the plain sloping toward the sea, we saw the villages of Tacaronte and Tegueste, and at length reached the fountain of "Agua Garcia," where our horses were watered. Behind the trough-shaped spring opens a narrow dark ravine, out of which issues the clear mountain-water. The high bank on the other side of the brook was shaded by beautiful trees, among which single palms here and there proudly raised their heads. The nearer the traveller approaches to the north-west coast, the more luxuriant does the vegetation become.

I had for a long time been seeking the tall heath-plant, which Von Buch had mentioned to me; and I now for the first time discovered that the young pine-trees by the roadside were nothing else than this plant! Presently we looked down into a baranco, the sides of which were thickly covered with these Ericas, many twenty feet high. The country was now prettier: the sloping ground from the sea, up to the cloud-topped, wooded mountains of the Cumbra, was covered with vines, fig-trees, with occasional orange-trees and laurels, whilst

articulated Euphorbias grew plentifully by the roadside. At every step the vegetation increased in luxuriance and variety up to Matanza*, where it reaches its climax, whilst innumerable single slender palm-stems raised their rich, graceful crowns among the other trees and bushes: they are not a wood of palms, and yet they might form one, if they could all be brought together. I should call Madeira the island of bananas, and Teneriffe the island of palms. Although the crowns of some palms are barbarously lopped off, or their branches bound together over their heads into a tall erect bundle, yet there is an abundance of splendid, perfect crowns.

Passing several barancos, on the sides of which the tosca, the tuff, is clearly recognized, we rode through the village of Vittoria†, and from thence down again through a baranco, until we reached the slope of Santa Ursula. The road leading up to the palm-covered hill upon which

* "Following the route to the port of the Orotava, we passed the pretty villages of Matanza and Victoria. These names are found together in all the Spanish colonies: they contrast disagreeably with the feelings of peace and calm which these countries inspire. Matanza signifies butchery, or carnage, and the very word recalls the price at which the victory was achieved. In the New World it generally indicates the defeat of the natives; at Teneriffe, the village of Matanza was founded on a spot where the Spaniards were conquered by those very Guanches, whom they soon after sold as slaves in the European markets." See Voyage au Nouveau Cont. par Alex. de Humboldt, tom. I. chap. 2. page 113.

† In the battle of Vittoria Don Alonzo de Luga subdued the island of Teneriffe, and immediately after, on the 25th of June, 1495, laid the foundations of the new town of San Cristoval de la Laguna. See Von Buch's Physikalische Beschreibung der Canarischen Inseln, page 123.

the village lies is lined by an avenue of aloes, twenty feet high and with yellow blossoms.

The eye had hitherto only followed the slightly curved line of coast as far as Puerto Orotava: the road now turned sharply to the left, around the spur of this mountain, which had hitherto shut in the view, when all at once we reached the edge of a steep declivity, and looked down upon the smiling plain stretched out at our feet. On its skirts, toward the mountains of the Cumbra and the Circus rising on the east into the clouds, six to seven thousand feet high, lay the small white town of Villa Orotava, lighted up with the bright gleams of the noon-day sun. Our brisk young Arrieros ceased their melancholy Spanish songs, and exclaimed with one voice, "La villa! la villa!" In the north, the noble plain is bounded by this mountain, which, rooted high up in the Cumbra, descends obliquely in a straight line from one of its domes, the Perexil, 5658 feet high, toward Santa Ursula; whilst seen from the south, it has the appearance of an immense precipice. Opposite to it, encompassing the charming plains on the south, rises the rugged Tigayga, which also descends like a colossal wall from out the clouds to the azure waves that wash the western limit of the smiling valley. Here lies Puerto Orotava, at the foot of two eruption-cones, which appear from a distance almost like molehills: in its roadstead were two or three schooners.

We descended to the plain. Although here and there yellow fields of maize mingled with indescribably fresh verdure, yet the splendid plain, with its smiling fields,

its endless, shady pergolas, weighed down by luxuriant vines, its border of chestnut-trees and laurels, which on the east rise up the gentle slopes of the mountains, appeared like the most luxuriant garden. Hedges of blackberry-bushes lined the road, and a number of fine specimens of the *Pinus canariensis* grew by the wayside. The palms disappear in the lovely valley, and are not seen again till the traveller comes to the gardens of Orotava; but their loss is compensated by some large and handsome dragon-trees of strange, fantastic forms, which are the more impressed upon my memory as being the only ones I met with on my travels.

On approaching the town of Orotava, which is built picturesquely on a gently sloping hill, the road runs between garden-walls. Splendid bananas, the first we had seen since leaving Santa Cruz, overtop these walls with their gigantic leaves, and bend over them in lofty, shady arches. It was three o'clock in the afternoon when we dismounted from our tired horses in the small courtyard of the *fonda* near the church. I took a stroll before dinner, and had the pleasure of discovering an immense dragon-tree in the garden of the "Casa Franqui*;" an enormous palm stood as a *pendant* on the other side of the house; bushes of dark-red roses and red oleanders in the foreground, intermixed with the fresh, bright green of the banana-leaves, gave a finishing touch to the picture. After dinner we went—a matter

* See the Voyage de Humboldt et Bonpland, Part I. tome I. page 117. The height appeared to Humboldt to be fifty to sixty feet, and the circumference at the root was forty-five feet.

of course in Spanish countries—to the Alameda, a broad terrace, shaded by fine trees, but not much animated. The view of the town is very picturesque, but the sun had unfortunately already set, and the Peak, the crown to the whole prospect, was veiled. My companions spent the rest of the evening in a party at the residence of the beautiful Doña Ines de Lobo, to whose house they had been invited by the uncle of that lady, a certain Don Balthasar, who was staying at our fonda. They amused themselves greatly, and danced until a late hour. Little Mr. Scowell and I meanwhile remained at home.

August 8th.—Notwithstanding the revels of the preceding night, our beasts were ready mounted this morning at half-past six o'clock: my companions had all ordered mules, but I remained true to my active little pony. Our caravan rode over the blooming plain of Orotava, from which a refreshing morning mist arose, directing its course toward the Peak, whose yellowish white summit rose before us on the left, above the top of the Tigayga. Further left, the mountains of the Cumbra, which accompanied our road, shut out all prospect; so that the Peak, with the declivity of the Tigayga descending obliquely toward the sea, seemed to form *one* mass, and had exactly the same aspect as the right side of Etna. Close behind Orotava we rode through the wide Barranco de San Antonio, descending from the chesnut-woods of the Cumbra, which is green to its summit. Tall chestnut-trees, ericas, and laurels shade the edges of this ravine, which is encompassed with black, perpendi-

cular walls. The view back on Orotava, on the smiling plain, bounded by the steep mountain of Santa Ursula, which rises from the sea up to the Cumbra, is one of the most picturesque that can be imagined.

From hence the road continues for some time obliquely in the direction of the mountains, over fields and vine-clad hills, past isolated groups of small huts, up to the edge of the thicket. We entered a low underwood of ericas and laurels, scarcely the height of a man on horseback, very different from the shady woods, with their tall stems, in which the Baranco de San Antonio takes its rise. But the green of the laurel refreshes the eye, and compensates for much. We rode on and on in this wood for a long while, traversing many barancos, the black, rocky bottom of which reminded me strongly of the lava, washed smooth by the mountain-waters, just above the cottage of the Baron von Waltershausen, at the limit of the wood-region on Ætna. This similarity struck me yesterday at the Baranco de los Santos.

The air became gradually cooler. Without observing it, we had already ascended a considerable way; the laurels had disappeared, and instead the perfumed Brezo mingled its pale green with the darker green of the erica-bushes, which were more and more stunted. The mists and clouds rose gradually up the Tigayga from the sea, swimming freely in space. I looked around—a perpendicular, dark wall of cloud stood some thousand paces distant behind me. Its lower edge touched the erica-woods on the slope of the mountain at my feet, and shut out from my view Orotava with its gently

rising plain and the ocean. High up, on the edge of the gigantic wall of cloud, I saw here and there a narrow dark-blue stripe, which with some difficulty I recognized as the faint glimmer of the sea-horizon. As we ascended, the view enlarged over a fleecy or undulating sea of clouds, similar to that we had recently seen on Ætna. The narrow path led along the upper acclivities of the Cumbra, under a cone of red and yellow pumice-stone, in parts broken down, which our guide called "Hajar;" and ascending gradually we came, shortly before it reached the upper limit of the erica-zone, to some boulders of lava thrown in wild confusion over one another. Upon these blocks we sat down to breakfast, in the warm sunshine.

For the first time the Peak appeared distinctly separated from the Tigayga. The Teyde, a gigantic conical mountain, similar in form to the upper cone of Ætna, but of much greater magnitude, rose high above the sloping ground before us, scattered over with boulders of lava. Its side walls had a gentle inclination; on the left hand the mountain was a little rounded toward the summit, marking the point where the Piton begins,—that small cone of whitish pumice-stone, which appears from this spot like a small white cap set upon the large cone. The right wall of the Piton on the contrary formed a continuous line with the right wall of the Peak, which is steeper near its base, as if descending into a ravine, and prevented our seeing the slope before us. Further to the right, distinctly separated from the base of the Peak, rose the Tigayga with a short

ascent, as if springing from the same valley; as we approached, it assumed a steeper aspect. Whilst the dark outline of the mighty Peak stood out sharply against the sky, like a greenish-black mass, with clefts and streaks of various shades, the fields of yellow pumice-stone, contrasting strongly with it, descended on the left down the lower part of its great cone in broad stripes, spreading out as it were over the round, sandy back of the Monte Trigo *, which here leans on the foot of the mountain, dazzling as streams of white sand pouring into a sea of sand.

After resting for half an hour we again set out in the burning heat. We soon left the heath, which was now scarcely three to four feet tall, and with it all vegetation disappeared except the "Retama blanca" of the Cumbra. I imagined that we must be in the country of the Portillo, and asked the Arrieros, but they knew no such name. Did it still lie before us, or might it perhaps have been the very spot where we had breakfasted? All doubt of our having passed it was soon removed, when we came to the Llano de las Retamas †, belonging to the Cañadas ‡. A broad, yellow plain of pumice-stone lay

* Monte Trigo, also "la Montaña Blanca." Berthelot, II. 1. page 89.

† According to Von Buch's work, page 185, the Retama, the *Spartium nubigenum* (*Genista*, broom) never occurs at a less height than 5900 feet, and never above a height of 9700 feet. "The road over the Cumbra from Orotava to Guimar is the north-east limit of the appearance of this shrub. It is found in great quantities in the Cañada under the Cone of the Peak, which is thence called Llano de las Retamas."

‡ "The entire mass of the Teyde rises to a height of 3030 feet above the plateau of the Cañadas." Berthelot, II. 1. page 317.

before us, out of which rose the Peak of Teyde more and more gigantic into the dark-blue air. It had assumed the form of a rugged, truncated, wide cone, from four to five thousand feet in height, with precipitous sides, rising in colossal majesty above the wavy sea of pumice-stone, the fine sand of which gleamed in the sun in iridescent colours passing from white into yellow, brown, and even bright red. Every object, even the black Peak itself, now took a warmer tone, from the burning sun on the Llano at a height of six to seven thousand feet above the sea*.

As the eye grows dazzled by wandering over large plains of snow, and loses its power of measuring height and depth, so we were unable to measure the height of the dazzling waves of pumice-stone which surrounded us. Continuous ridges of red jagged rocks of lava ran along the back of this hill, resembling the long lines of foam often seen on the tops of waves as they roll on shore in a rough sea, whilst here and there rose pointed cones of lava from out the sea of sand. From the burnt-out, volcanic base of the Teyde, the dazzled eye rises involuntarily upwards to the colossal volcano, to seek refreshment in the dark-blue colour of the heavens.

We rode, as it seemed, between streams of lava stiffened in their course, the valleys of which were filled with pumice-stone. The Piton, which at first rises high out of the upper section of the conical mountain, became

* According to Captain Vidal's statement the summit of the Peak is 28° 17′ north latitude and 16° 39′ west longitude. Horsburgh, India Direct. etc. Vol. I. page 11.

smaller as we approached it, and as the upper surface of the volcano widened, until at length it was quite immersed in the latter. The sandy ridge, which we had seen from our breakfast-place, at the foot of the Peak, had gradually become a hill, nay almost a mountain: we soon reached it, and our tired beasts climbed upon its pumice-stone slope; large single blocks of basalt lay at the side. At length we stood at the foot of the dark mountain-cone. After riding up this in a zigzag course, between sharp blocks of obsidian, such as Von Buch describes, a last ascent of scarcely two hundred feet brought us to the Estancia de los Ingleses*, the well-known bivouac, sheltered by black masses of rock. Thus ended our day's labour.

On our ride up, I had remarked that, at the commencement of the plain of pumice-stone, the mountains of the Cumbra closed behind us and joined others; nor had it escaped my notice, that we rode round the base of the Tigayga; nevertheless the Circus which encompasses the foot of the Peak on the south-west, south, and east sides had not yet appeared so clear to view as the map had led me to expect. In the afternoon therefore I ascended a little way up the black cone. How shall I describe what I there beheld, looking down on the long violet-coloured ridge of the Cumbra, which with its indentations formed bays and promontories, right and left, in the white sea of fleecy clouds, whilst it descended gently towards the Llano de las Retamas! On the right, a long

* According to Von Buch, page 100, the "Estancia Abaxo," or "de los Ingleses," lies at a height of 7756 feet above the sea.

wall of rock joined these acclivities of the Cumbra,—a continuation of the margin of the pumice-stone plain. Ascending between the obsidians of the cone, I saw at every step this colossal wall, nearly two thousand feet high, curving more and more round the base of the Peak, whilst its upper contour, quitting the straight line, began to form single cupolas. I recognized the Circus—the mighty, semicircular portion of the elevation-crater, which alone had braved all the later eruptions of the volcano—the Circus, with its horizontal strata, which at times resemble narrow terraces, or rather small steps, whilst high up along its wall is seen the narrow, white, trachytic band, the silver stripe of Angostura. I looked down: my eye glided quickly along the steep declivity on which I was standing, over the huge, black mass of pointed glassy blocks of obsidian scattered deep below in wild confusion, upon two rounded cupolas, which rose close to the base of the Peak from the subjacent plain of pumice-stone, passing from yellow into red, and contrasting strongly with the edge of the black obsidian field. This lower surface, the bottom of the elevation-crater, from which the Teyde arose, is covered with black masses and red blocks of lava; on every side rise up ridges and cones, between which wind single streams of lava. Below on the right, close under the highest precipice of the Circus, stand the dark-red waves of a mighty stream, arrested and stiffened in its course, the force of whose current is still perceptible. Above this fearful scene of volcanic action, this gigantic wall, which once rose out of the depths of ocean—high above all

these scenes and objects, the giant Peak like a colossal pyramid, purpled by the setting sun, flung his shadow over the mists which covered the ocean.

The wonderful line of shadow had not yet reached the glorious mountain, whose base was lost in the mists. The noble, alpine chain of the Gran Canaria—that island which once braved for eighty years the Spanish dominion of the world—lay spread out before me in the most beautiful distinctness. The further I ascended, the higher my spectral guide rose out of the sea of mists, until it entirely concealed Canaria. It was now night: the fires of the Estancia were the beacon which lighted me along my steep descent, and led me back to my companions. At the moment I rejoined them it was discovered that Count Oriolla was missing.

Sharing the general attraction of the fearful and majestic scenes around us, the Count had left the Estancia at the same time with myself; but whilst sketching upon the acclivity, I had soon lost sight of him. With his usual boldness and perseverance, accustomed never to do anything by halves, he climbed up the cone, to explore the secrets of the mountain. At half-past seven o'clock, shortly after sunset, the Count reached the edge of the crater; but to return was not so easy, and he wandered about nearly the whole night in the dark among boulders and sharp masses of rock, where a false step might at any moment have proved fatal. His joy may readily be imagined when groping about on the stones he at length felt again the first trace of vegetation under his hand—a little tuft of moss, which, as the harbinger of hope, he

took with him to keep in remembrance of this fearful night. He descended lower and lower down the cone; and had already given up the hope of finding his companions again, when high above his head he beheld our bright, blazing fire. It was half-past twelve when Count Oriolla rejoined us; wearied out with his solitary ascent of the Peak—perhaps the most adventurous one ever undertaken—he sank down upon the ground at our side. Great was the joy, at least among those who were still awake, at seeing him amongst us again. All our cries had been ineffectual, and whoever has ascended the Peak will easily imagine the impossibility of searching for our companion in the dark over those fields of lava and obsidian.

The stars shone with the same brilliancy as in the night when we ascended Mount Ætna. The fire cast the faint glimmer of its expiring light on my companions, who lay scattered about fast asleep, and on the masses of rock that surrounded us like the walls of an apartment; whilst the flame, blazing up among the adjacent blocks, illumined the motionless groups of our Practicos and Arrieros, who lay wrapped in their woollen cloaks, the only bright point in the surrounding darkness. A solemn stillness reigned through all nature.

The Teyde has now rested from his convulsions for nearly half a century*; he sleeps a long sleep; yet who

* The last eruption, which broke out on the side of the Peak, took place in the year 1718, and destroyed a great part of the vineyards at its foot. On the 17th of June, 1798, four cones broke out deep down on the west foot of the Chahorra, and almost at the end of the environs of the Circus. The lava reached the rocks of the Circus, and extended over the Cañada.

can foretell when he may again awake? or who can say that life is yet extinct within him? It was a glorious night—at an elevation of 7756 feet above the ocean—but though the air was fresh it was by no means cold.

August 9th.—After a short night's rest I was awakened at two o'clock, and in half an hour we were on our march by starlight. Count Oriolla was unfortunately too much exhausted to be able to accompany us. At first we followed a zigzag path, at a gentle pace, mounting in the loose pumice-stone; and in about an hour after passing Alta Vista, we reached the point where last evening I had seen the sun go down. Alta Vista lies at 9753 feet above the sea, on the edge of the Malpays del Teyde, that large field of obsidian blocks precipitated one over another in wild confusion, which, commencing high up on the cone of the Peak, descends to the pumice-stone hill below the Estancia.

Every trace of a trodden path here ceases. Leaping from block to block, over innumerable clefts and fissures, we proceeded onwards, following one another closely but slowly over the black sea of obsidian. We could not see where we stepped, and continually slipped on the smooth surface of the lava, often obliged to balance ourselves on the glassy edge of an unsteady block, until the foremost of our party had found a firm footing, or ventured on a leap, which we were compelled to follow. We repeatedly stopped an instant to take breath, for the toil was increased by the constant care necessary to prevent our slipping between the sharp masses of obsidian.

The day at length began to dawn, and the difficulty

of the ascent was lessened. We had already ascended a great part of the cone, and the stars were still shining in the clear blue sky, when we saw, high above the colossal Circus, the streaks of the glimmering dawn. Just over this rosy-coloured border one star particularly attracted my attention: instead of falling perpendicularly, like a shooting-star, it had a quick, fitful, horizontal motion. I pointed this phenomenon out to my companions, who saw it as distinctly as myself. When looked at through a telescope the star appeared to form two, united by a winding tail, the motion of which was the same as seen by the naked eye.

In other stars also we discovered through the telescope a similar but feebler motion, which was not visible to the naked eye. We thought it possible that this extraordinary phenomenon might be attributable to the heated state of our blood, which had been set in violent motion by our laborious passage over the Malpays. I may add, that during the night we also saw a number of shooting-stars, but could perceive no such tail attached to them as is said to be frequently witnessed in these latitudes. The flitting motion of the star above described near the horizon does not moreover at all resemble the motion of a falling-star*.

The steep obsidian-field was at length crossed, and a footpath led us through a small, crater-like hollow, on the opposite edge of which we reached the narrow plateau called the Rambleta. At this point, which according to

* Compare Humboldt's Voyage aux Régions Équin. du Nouv. Cont. tome I. chap. 2.

Berthelot lies at a height of 10,992 feet above the sea, we stood close to the foot of the Piton, which shone brightly before us. It was now a quarter to five o'clock, and we had no time to lose if we desired to reach the summit of the Peak before sunrise: without allowing ourselves therefore any rest, we resolved at once to climb up this last cone, eight hundred feet in height. In spite of the loose pumice-stone, which yielded to our feet at every step, and the ascent over which is as difficult as that of Vesuvius, we reached half the height of the Piton* without a halt, thanks to the ridges of trachytic rock projecting just above the pumice-stone. Here we stopped to rest, and witness the sun's orb emerging from the sea, for it was now impossible to climb to the top of the volcano before its rise.

Although the thermometer stood at 3°·9 R., our hands were quite cold. In ascending Ætna on the contrary the air appeared to me more rarefied than at this moment, but at Alta Vista and a little way further up it seemed somewhat more rarefied than at this elevation.

About a quarter of an hour after sunrise we reached the edge of the crater, and immediately ascended to its highest point, on the north-east side. The temperature had now risen to 5°·0 R. We gazed first upon the crater, a small, flat hollow, with rocky or rather stony edges, and then on the sea of clouds to the north and west of the island, above which the sharp outline of the pyramidal shadow of the volcano stretched in immense extent.

* According to Von Buch the height of the Piton is 800 feet; Von Humboldt makes it 504; and Berthelot only 438.

Let the reader call to mind the "fleecy sheep," so often seen in a blue sky, and imagine them at four to five thousand feet beneath him, but closely compressed into a white, fleecy or wavy surface, its edges rising to a level with the eye on the edge of the dark azure vault of heaven, and he will have an idea of that sea of clouds, above which the Teyde flung its black shadow, whose outline was now marked still more distinctly than yesterday. The long upper ridge of the reddish, illumined rocky wall of Palma* had penetrated through the sea of clouds, whilst the remaining part of the island was concealed from our sight. La Gomera was only half visible, and looked like a long, flat and sharply articulated hill with a curved back; whilst a light field of clouds, veiling its western half, formed again the transition to the white, fleecy clouds. Above the Gomera, in the far distance, an indistinct, scarcely perceptible, dark-bluish ridge rose out of the clouds,—this was Ferro!—that name familiar to us from childhood, and associated with our first study of geography,—that little island in the wide ocean, from whose meridian some of our geographers even at the present day reckon the longitude, although to all other nations, and to the nomadic dwellers on the ocean, it has long yielded to the observatories of the two great cities of the world.

Following with our eye the verdant, undulating western acclivity of the Teyde, with its outrunning ravines, as

* Palma, i. e. Pico de los Muchachos, is 75 leagues distant from the Peak of Teneriffe. Ferro is the same distance. Canaria, i. e. Monte del Pozo de las Nieves, is 58 leagues, and Gomera 27.

far as the blue ocean, or looking down on the declivity of the Tigayga in the direction of Icod el Alto, we saw the lower edge of the sea of clouds, one while concealing Puerto and Villa Orotava from our view, at another unveiling it for a few instants, and playing with the line of the coast of Teneriffe. The country around Garachico, once the flourishing chief town, with its harbour (the only good one in the island) filled up with lava, remained obstinately concealed from sight by a grey mist. The sharply articulated mountain-ridge of the Cumbra, of an azure-blue passing into violet, lay stretched out far below us, but rising clear above the clouds and mist. Toward Santa Cruz the view extended obliquely for some distance beneath the mists, and upon the small speck of blue water which remained open to view we discerned clearly the frigate and corvette, among the other ships lying in the roadstead.

On looking up to the point where the sun had just risen, the ridge of the blue mountain-chain of Canaria came in view, with its noble outlines, rising high above the grey mists, which in smaller or larger detached fields were swimming over the deep-blue ocean on the east of Teneriffe. Below, at the foot of the Peak, we looked down into the wide semicircular rocky walls of the Circus, and the pumice-stone and lava plains of the Cañadas, which skirt the foot of the volcano on this side; while beyond these the eye followed the line of coast round the Punta de Abona, Punta Roxa, and Punta Rasca, as far as the steep mountains lying beyond San Jago, in the direction of the western point, Punta de

Buenavista. Walking a few yards round the edge of the crater, we looked down into the larger and somewhat deeper crater of the Chahorra*, 9276 feet in height, and on to the declivity of this twin volcano, as Von Buch designates it, which is separated only by a slight depression from the Teyde, and strewn with the pumice-stone of the Peak as if with yellow sand.

A glorious panorama surrounded us! we stood upon the central volcano,—at its foot the scene of desolation out of which it arose, skirted by the smiling fields of Teneriffe, and all around the volcanic islands rising from the ocean, looking up to the Teyde as their common head: he is the fixed star—they the moons; their fires, their eruptions are all his work.

How is it, that on the crater's edge of a mighty volcano, our feelings are so much more excited than when we stand upon the dizzy summit of an Alpine mountain? There is the same sense of elevation on both spots: all around is grand and majestic; we are removed from earth, and feel ourselves nearer to heaven, to the illimitable, dark azure space; for we breathe the pure, rarefied air,—often too rarefied for us imperfect beings. To all these rapturous feelings we can give ourselves up undisturbed on the summit of the primæval Alpine mountain, whereas when standing beside the volcano's crater, they are stifled by sulphurous exhalations, which, like messengers from a fearful subterranean power, remind us continually that beneath the thin crust under our feet lie concealed the horrors of a fiery abyss. A death-

* Chahorra, or Pico Viejo, or Pico Quebrado:—Berthelot, II. 1. p. 89.

like stillness crowns the Alps—the volcano is instinct with life,—and what life! Here, on the summit of the Peak, we may aptly reflect on the sublime picture of its formation, which Von Buch depicts so simply and yet so forcibly*.

According to the views of that acute observer, the Circus, upheaved by the volcanic forces in the centre of our planet, rose out of the depths of the earth through the ocean a complete circle. Not finding any cleft in the covering crust, the active subterranean powers in the effort to force an outlet increased in strength, from the resistance of the superincumbent strata of basalt and conglomerate, until they acquired a resistless power, which tearing open the earth's crust, and forcing up to the surface the basaltic and conglomerate strata lying at the bottom of the sea, formed this mighty elevation-crater, and thus found a vent. On examining the Circus more closely, it appears to be broken up in the trachyte, and to have pushed aside the basaltic strata that covered it. But this huge, upraised mass fell back again, and soon closed the opening which such a force alone had created. No volcano arose; the permanent connection of the interior with the atmosphere was not yet opened: to establish this, and to afford a regular vent to the vapours, the Peak of Teyde and the Chahorra now rose out of the colossal elevation-crater, united in a single, immense trachytic dome, and enveloped in a mantle of basalt,—the whole mass at once, like a vault over the internal forces, which here open to themselves an outlet through the crater.

* See Von Buch, pages 220, 236, 237, 326.

All the action of the internal forces of the mountain centres in this forge, and as the upper portion falling in offers a greater resistance than single points in the circumference, especially when upheaved masses of lava stop the opening above, the vapour and lava burst out at the sides. These lateral eruptions have broken down the Circus on the north-west and north sides; immense streams of obsidian have flowed into the sea on the north-west toward Icod los Vinos, whilst in the west, at the foot of the Chahorra, those brown eruption-cones are seen of which Cordier counted about eighty in the direction of Garachico,—a sufficient proof of the enormous forces which here co-operated to throw down the elevation-crater, the first barrier against the ocean.

The crater of the Peak is no longer a fiery abyss, but merely a solfatara, of rather more than two English miles in circumference, and a depth of between 100 and 160 feet*. Sulphurous vapours are almost constantly rising from this warm basin, or breaking out on the sides of the cone, but not in a greater degree than on Ætna. These vapours of sulphuric acid have not however destroyed the hardness of the rose-coloured trachytic rocks forming the edge of the crater. In the interior of the latter are found masses of stone and rock, which appear to have been detached from the edges. On touching any object, at this height, the fingers are whitened with a clammy substance, which may perhaps be an effect of these vapours. The ground of the solfa-

* Berthelot (I. pag. 162) states the diameter of the crater at 600 feet, and its depth at 120.

tara is warm,—in some places indeed hot; nevertheless we could walk about in every part without inconvenience. The whole basin has a greyish-yellow colour, apparently occasioned by the sulphur, which frequently here forms the most beautiful crystals.

Climbing up the rock to the highest point of the crater's edge, we all in turn drank to the health of the three Sovereigns, whose subjects were met upon this spot—the Queen of England, our beloved King, and the King of Sardinia,—at an elevation of more than eleven thousand feet above the sea; whilst the west wind of the upper region, the counter-current of the eastern trade-wind of the ocean, drove the vapour toward us*. The wind blew from Palma, and comparing it with the point of sunrise I took it to be west-north-west; whilst in Santa Cruz the wind was blowing from the north-east, consequently nearer to the trade-wind. Thus we had personal experience on our own cheeks of this phenomenon, so well known but so seldom witnessed.

To escape the loose pumice-stone sand, we descended along the single ridges of trachytic stone, down to the foot of the Piton, which we reached in half an hour. From thence, tormented all the while by thirst and under a burning sun, we continued our descent for full an hour more, across the sloping, black field of glassy

* The height of the Peak is given variously as follows. According to Cassini, 15,804 feet—Feuillier, 13,278 feet—Borda's barometric measurement, 11,856 feet—Von Buch's chart, the arithmetical mean of two of Borda's measurements, 11,624 feet—Horsburgh, 11,539 feet—Borda's trigonometrical measurement, 11,430 feet—Alexander von Humboldt, 11,424 feet—Bouguer, 9,846 feet.

obsidian-blocks, "El Malpays," until at length the shouts of our Praticos announced "La cueva, la cueva! Agua, agua!" The Cueva del Hielo, or "de la Nieve," is a cave twenty feet deep in the plain of obsidian, in which is found fresh ice-water, for the crust of ice was plainly seen on the edges. We stopped here to refresh ourselves, and on starting again we perceived that one of our party, the young Count Viry, had lost his way among the slippery blocks: with the assistance of the guides however, who grumbled that the "Caballerito" had gone on before alone, Count Bismark soon found him.

At a short distance below the "Cueva" the blocks ceased, and with them the misery of our passage over the Malpays. We now came to a footpath and the first Retamas, and met some people from Orotava, who were coming to fetch ice from this cave, at a height of 9312 feet above the sea, in order to carry to Santa Cruz. At nine o'clock we again reached the Estancia de los Ingleses, where a good breakfast, with some of the chocolate intended for our expeditions in Brazil, awaited our arrival. We had expected that Captain Fitzgerald Gambier, the Commander of the 'Satellite,' who was to have come a shorter way from Santa Cruz across the Cumbra, would have reached the Estancia the previous evening: but he had not even yet arrived, at our return, and all hope of his joining our party vanished. It had first been arranged that, after ascending the Peak together, we should all return over the Cumbra; but this plan had to be given up, as our guides did not know the way.

Although we had much wished to traverse the road

over the long, basaltic mountain-ridge, we relinquished the idea with the less reluctance, as this path would have been much longer and more toilsome in the burning heat, after our excursion to the crater, than the easier route back to Orotava, which we now determined to follow. Captain Gambier, we afterwards heard, had given up the passage of the Cumbra for the same reasons, and had reached Orotava the previous evening; there however he found neither mules nor guides for his journey, and was therefore obliged to relinquish the ascent of the Peak altogether.

The sun's heat was oppressive, the sky dark blue, the Peak rose behind us in all his majesty, "a mountain upon a mountain," when reaching the skirts of the erica-wood, and bidding adieu to the Peak and the beautiful clear day, we descended into the damp sea of clouds, which now hung heavily over our heads. I stopped to sketch on the Llano de las Retamas, and it was four o'clock when, together with Count Oriolla following the rest of the party, I reached Villa Orotava, making the little detour which is always chosen in descending the mountain, to ease the animals. After dinner we went once more to the Alameda, and the rest of our party again joined a party at the house of the Doña Ines.

August 10*th*.—At seven o'clock this morning we left Orotava, and trotted briskly over the plain, for knowing the way we were not today obliged to remain with the Arrieros. From the heights of Santa Ursula I recognized clearly, on the north-west end of the island, the lighter mountains of Gomera, stretching out on the right

like a promontory into the sea beyond the spurs of the Tigayga. Palma, the rainy island among the Canaries, on the contrary, with its mountains seven thousand feet high, was again concealed from view by mists, although it lies at a short distance immediately before Orotava; from the summit of the Peak its rocky ridge appeared alone above the clouds. The beautiful palms and blooming aloes delighted us again on the rich acclivities towards Matanza, and Agua Garcia was chosen, as before, for our halting-place. Following the clear little brook we today entered the narrow ravine, where thick-stemmed erica-trees, thirty to forty feet tall, interlaced with lianas, united with stately laurels to form a charming, cool, and shady retreat, which can perhaps only find its equal in the primæval forests of the New World. Dr. Foster and my servant, who had with him the necessary remedies, here found an occasion to exercise their skill, in restoring an Arriero who was overpowered with fatigue.

Behind Laguna we met several trains of camels, some of them carrying two or three riders; the animals went single in file, that is to say not tied by a cord to the one before and the one behind, as is so frequently seen in the streets of Smyrna. Although to several of our party the sight of the camels was no novelty, none of us had ever been seated upon one, and we seized this opportunity to gratify our curiosity, and taking it in turn, rode three at a time a short distance on this ship of the desert. In the banana-court of Richardson's hotel at Santa Cruz, the little travelling party separated.

The oppressive heat in the town and its environs ap-

peared to us remarkable, as we had suffered scarcely at all from it on the north-west side of the island. A dinner, which I gave to the Commander and Officers of the 'Satellite' on board the Frigate, concluded the day. A Spanish brig-of-war in the meantime entered the roadstead; she appeared to be the only royal cruizer at that time in the waters of Teneriffe*.

August 11th.—At six o'clock this morning the top-gallant yards were crossed, and the topsails sheeted home; soon after the top-gallant sails were set, the jib hoisted, and the anchor raised. The corvette was waiting for us under sail. We steered S.S.E. until in a short time we caught a fresh north-east wind, which carried us swiftly along the south-east coast of Teneriffe. Grand Canaria was not visible from the deck. On the other hand Teneriffe appeared to form a long, lofty, connected line of mountains, above which was seen the

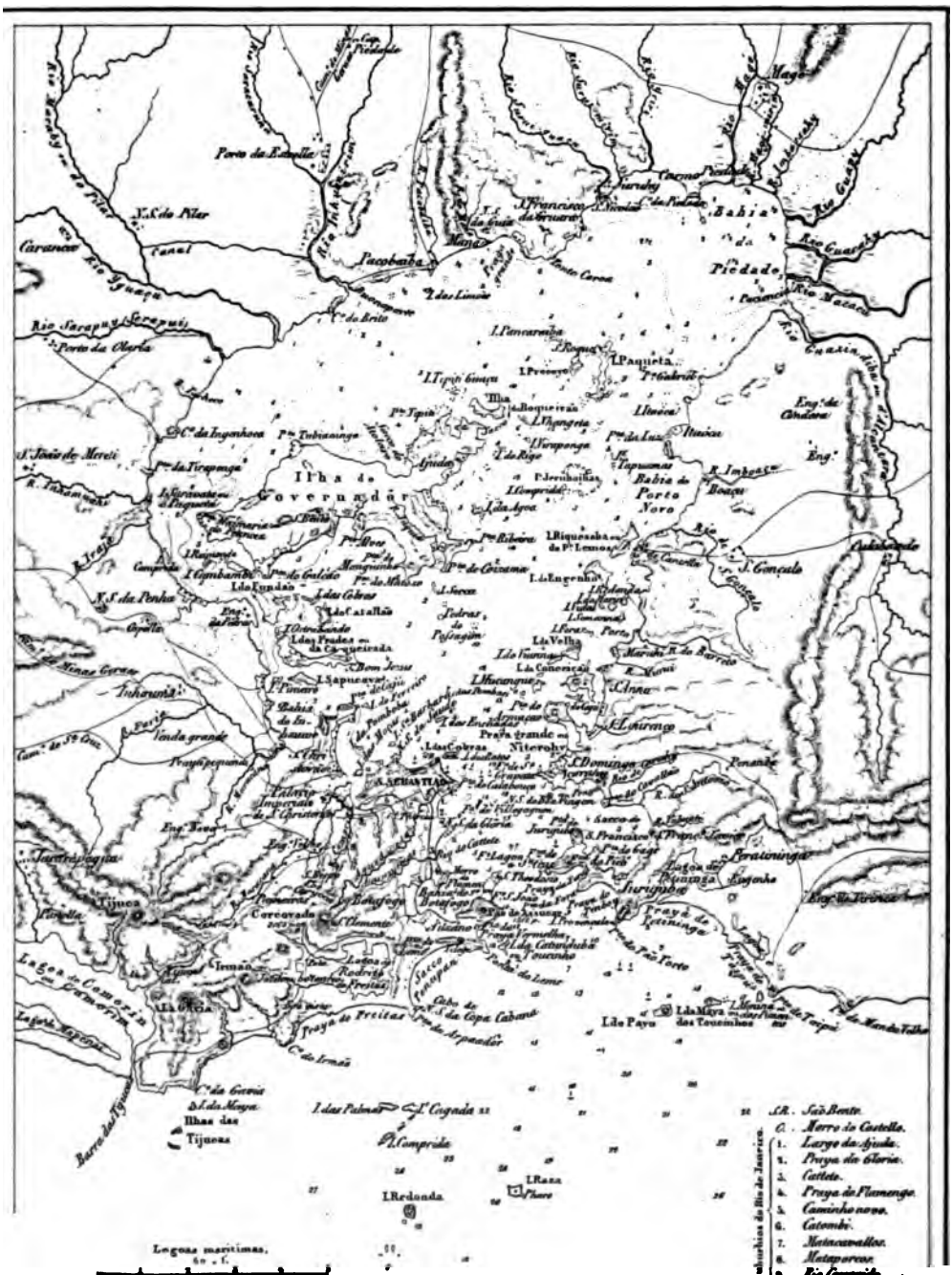
* According to the census of the year 1812, Teneriffe had about 70,000 inhabitants, on 41·4 square miles. The seven inhabited of the Canary Islands (including Teneriffe) have, according to the same statement, on 152·5 square miles, a population of about 194,000 inhabitants, whilst an official census of the year 1836 gives the last at about 200,000, but an estimate for the year 1829 (according to Macgregor) makes it 230,000, consequently on the average 1364 souls on the square mile, whereas in Teneriffe there are 1971; about the density of population of the province of Prussia, but in fact for the inhabited parts of the islands much more considerable, and at least twice or thrice as large. The following statement in the Weimar Almanack of 1844 may serve for comparison. The Azores have, upon 54 square miles, 214,300 inhabitants: the Cape Verd Islands, on 79·31 square miles, 65,000; which gives for the former a population of 4000, but for the latter one of only 820 inhabitants on the square mile.

pointed cone of the Peak*. The day was very clear: sea and sky vied in displaying the most varied shades of blue; the sky passing almost into grey, and the ocean on the contrary of the deepest azure. A greyish lilac tinge, passing slightly into red, was diffused over the mountains of the island, which as we proceeded south became more and more compressed into a flat pyramid, surmounted by the Peak, which appeared in the mist that veiled the whole scene to form only one connected mountain with the chain in the foreground. Long did we gaze upon this picture,—it was our farewell to the land. How would that land appear which should again first meet our sight? Would it bear comparison with the Peak of Teyde, that giant mountain in the midst of the ocean, against which the force of the north-east trade-wind breaks in the autumn, drawing down from the summit to its foot the upper current of air, which arises at the equator, and forcing it to sweep across the sea throughout the winter?

A few hours later every trace of land had disappeared. The proud Frigate felt in her element, and dashed gallantly onwards in her course in the direction S. 62° 30′ W. toward the heights of the Cape Verd islands. At noon we found ourselves in 27° 35′ 0″ north latitude and 16° 37′ 36″ longitude west of Greenwich, so that we had already made fifty-six nautical miles. The night was clear and fine, but the Frigate rolled more than usual.

* According to Alexander von Humboldt the Peak is visible at a distance of 1° 57′ 22″ or 29½ German miles. Mont Blanc on the contrary, 14,811 feet high, is visible at a distance of 33¼; and Chimborazo, 20,100 feet high, at a distance of 38⅞ German miles.

A BAHIA
DO
RIO DE JANEIRO.



RIO DE JANEIRO.

15 days Passage.

SEPTEMBER 5th.—The splashing sound of the waves, which sent their spray through the port-hole of my cabin, awoke me from my pleasant dreams before five o'clock. I jumped from my hammock, and fastened the window, to prevent a repetition of this greeting from the ocean,—the first of the kind I had experienced in my cabin during our long voyage. When I went on deck, the sailors had just taken in two reefs in the top-sails, and handed the top-gallants. We were keeping our old course; yesterday, or in the previous night, an east-north-east, and afterwards a north-east or north-north-east wind, which prevails around Cabo Frio, had succeeded the south-east trade-wind. In the course of yesterday we passed the line of no magnetic variation, which touches on Cabo Frio, corresponding to the first magnetic meridian,—that line which three centuries ago Columbus to his astonishment discovered one hundred leagues west of Flores, and which subsequently, at

his suggestion, determined in a great measure the boundary-line which the Pope established between the newly discovered and acquired territories of Spain and Portugal. In order to stand off from the land, the proximity of which was anticipated with certainty, we changed our course before midnight, and with a fresh wind and a swelling sea made a tack to the south until four o'clock this morning*.

Every one was anxiously on the look-out to catch a sight of Cabo Frio. At sunrise some fancied they could descry land, but the first glimpse of it was not seen until between ten and eleven o'clock. By degrees the outline of a chain of mountains came in sight, although indistinctly, and subsequently a conical mountain was seen connected with this range on the west: Cabo Frio however was not discernible, but a faint shade, which continued the range toward the east, indicated the spot where this sharp angle of the great continent of South America was to be looked for. Our chart gave the ship's place at noon in 23° 20′ south latitude, and 42° 40′ 15″ longitude west of Greenwich, and the entrance into the Bay of Rio in the north-west thirty-eight leagues a-head of us: the range, on the contrary, parallel to which we had been steering, proved to be the mountains at Cabo Negro, distant twenty-four leagues in nearly a northerly direction.

* On the morning of the fourth of September the variation according to the Master (Piloto) of the 'San Michele,' Mr. Vian, was 5° W., and at noon we were in 21° 52′ 33″ south latitude, and 39° 25′ 39″ west longitude; we had at sunset 0° 45′ east variation.

Wind and waves had subsided, the studding-sails had been for some time set, and our new course north-west allowed us gradually to carry full canvass. The temperature of the air and sea was equally and remarkably low, and the azure blue colour of the latter had changed to a light-green. A milky bluish mist deprived the atmosphere near the horizon in part of its transparency, and the high coast was seen as through a veil.

The dinner-hour—an important one on board ship—had been fixed earlier today than usual, as we expected to be off the entrance of the Bay by four o'clock. When we went on deck again after dinner, a part of the crew had already exchanged their coarse coloured shirts for white ones and trowsers, and all were busied in clearing and coiling down the running rigging and tackling, washing the decks, getting the guns ready for the salute, and clearing the anchor. The officers made their appearance one after another in dress-uniform, and the deck of the 'San Michele', with all this unusual festal array, was hardly to be recognized. I hastened to join a group of curious spectators, who were gathered on and about the bowsprit and forward on the gunwale, while even up aloft on the yards of the foremast were perched some white figures.

All gazed with astonishment at the strange forms of the mountainous coast, which lay stretched out before us in wide extent from west to east. On the extreme left rose a small cone out of the sea, like an island, with which was connected on the right several small islands that

looked like points. Then followed the wonderful mountain-chain, the outlines of which resemble a giant lying on his back,—a sure landmark to sailors at the entrance to the harbour of Rio—that king of harbours! The head of "the Giant," with an immense aquiline nose and wide open mouth, is formed by the steep rock called the Gavia (the Topsail), to which the British sailors have given the far more significant name of "Lord Hood's Nose." The giant's hands are crossed over the belly, and are formed by the two points of the Tijuca, the Pico do Papagayo and the other on its right, which together are called "Os dous Irmãos" (the two Brothers): these were today almost concealed by the fog. The raised knee is formed by the pointed Corcovado (the Hump-backed), and the Pão de Assucar (the Sugarloaf) describes the immense foot,—a huge conical rock, which does honour to its name. On the right of the sleeping guardian's foot, and close to the steep wall of the Pão de Assucar, lies the narrow entrance, and in front advance the small islands, on one of which, the Ilha Raza (flat island), stands a lighthouse. Behind this group extends a steep, rugged chain of mountains, or rather a series of single mountains united at their base, of strange yet beautiful and noble forms, which continued the line of coast eastwards, and vanished in the mist in the direction of Cabo Frio. Some schooners were cruising before the coast.

Stretched out before us—at first visible only through the telescope, but soon by the naked eye—lay those wonders of tropical vegetation, which seen in books and draw-

ings often appear to border on the fabulous. Wherever the eye ranged, the mountains were clothed with forests, above the outline of which rose single slender palms; while various trees, of forms which a European has never seen, overtopped the plants and shrubs that covered the hill-sides,—trees with full, gigantic crowns, or shooting lightly upwards, and stretching their slender arms and fantastic boughs high into the air. But it is impossible to form a conception of the beauty of outline of these mountain-ranges, broken here and there by the tall stems and branches of picturesque, colossal trees. Smooth, black walls of rock in some places form the precipitous sides of the mountains, or shoot up in detached pinnacles and cones, while a narrow line of white sand, washed by the sea, extends along their base.

The islands lying before the entrance of the Bay—which were now so close to us that we could hear the noise of the breakers dashing over the slanting shelves of rock upon the shore—are clothed with thick foliage, magnificent palm-trees, and every variety of underwood and shrubs. On these lovely islands the richness and beauty of nature under the tropics first opened on us. No one who has not visited the torrid zone can form an idea of such a thicket, a labyrinth of vegetation. On the mountains of the continent, on the other hand, we could by degrees discern whole forests of palm-trees, the crowns of which were bowed to the west by the trade-wind; while the slender stems of the cactus climbed up the naked rocks. Canoes with negroes were passing and repassing the islands. A

large black bird, the first Urubú (*Cathartes A-Ura*) that came in sight, flew screaming, with outspread wings, high over our heads. Every object around was new to us, and our minds were filled with one impression—the different aspect of the land before us to that of Europe, —whether America, India, or Brazil, it was at all events not Europe. This was the first impression that America made upon us: everything appeared strange and wonderful.

We sailed between the above-mentioned groups of islands: what a beautiful scene! On our right hand the mountains of the coast (amongst which was prominently seen one dark rugged wall of rock, and the water-channels in its sides) formed, together with these isles, a charming picture, enriched with the most noble, and luxuriant tropical vegetation. Scarcely had we passed the islands, when the entrance to the Bay opened distinctly on our view.

The mountain-ranges on our right declined gradually from east to west toward the Bay, terminating in a ridge of rock, at the end of which, but parted from it by a narrow cleft, the white fort of Santa Cruz projects into the entrance. Opposite to this the smooth rocky colossus of the Pão de Assucar rises almost perpendicularly out of the sea, and behind it is seen a small, green, insular-like point of land, with the forts of S. João and S. Theodosio, which were hardly discernible. The shore of the Bay is flat, and looks like a line of low bluish islands; on a broad projection of land in the western corner, forming several terraces, is built the city of Rio

de Janeiro, and behind it on the right is seen the forest of masts of the ships in the harbour, while still further in that direction toward the middle of the bay, the men-of-war lie anchored in the roadstead.

The Sardinian flag had for some time floated from our gaff-peak, and through the telescope we could descry the green flag of Brazil with the yellow square, at Santa Cruz. The falling wind and ebbing tide allowed us to make but slow way. In front of the city two fortified islands now came in view,—Fort Lagem, and behind it the other larger one, Villegagnon. The city and roadstead became by degrees more clearly visible. An American schooner, the 'British Commodore,' and the 'Malabar' hove in sight, and soon afterwards our companion the 'Satellite,' at anchor, which had just fired her salute.

The sun was setting, and the gigantic form of the Sugarloaf rose straight up, near us on the left, whilst the mountains on the west side were accumulated in a mass of the strangest forms. The cones, pinnacles and summits in the front line were coloured deep-blue,—those behind had more of a greyish-violet tone. But how shall I give an idea of the wonderful forms of these mountains? they produce the same kind of impression as the decorations in some theatrical representation of magic, in which the marvellous supersedes altogether any imitation or effect of nature.

It was about five o'clock, when the breeze dropped just as we came close under the Fort of Santa Cruz,—

near enough to distinguish the guns and soldiers; the houses in Rio also were now more clearly seen. Each of the two terrace-like slopes of the city terminates in a long building, with two towers, the convents of Santa Thereza and S. Bento. The Sugarloaf resumed its first form, except that it seemed as if a portion had been struck off from the perpendicular wall on its summit. A small Brazilian steamer was coming out of the Bay, and several fishing-canoes manned with negroes were entering. Black and white water-birds flew screaming over our heads. The red orb of the sun was sinking behind the mountains of the Corcovado, suffusing them with a fiery glow, and casting a copper-red gleam on the surface of the water at the entrance of the Bay. The evening-gun boomed from the 'British Commodore,' and the squadron struck their ensigns and top-gallant yards.

The Sardinian and soon after the Prussian Consul, Mr. Theremin, came on board the Frigate. I had made the acquaintance of the latter shortly before my departure from Berlin. Rio is his second maternal city; he has spent here the greater part of his youth, and now, grown up to manhood, he has succeeded his father in the Consulate. After the first joy at meeting again, he expressed his regret that the mist veiled from our sight one of the chief beauties in the splendid bay—the Serra dos Orgãos, from three to four thousand feet in height, which with its pointed summits forms the background in the grand picture. Nevertheless it seemed not to require this feature, for the general impression of all we had

seen this day, of the nearer environs of the Bay, was so overpowering, that nothing was left for the most vivid imagination to supply. Never had any view impressed me so forcibly: even the aspect of Naples, imposing and animated Naples, with Vesuvius and her magnificent bay, sinks in the comparison; even the oriental splendour of Constantinople, where white cupolas and slender minarets rise proudly on her charming hills, where cypress-groves overshadow the graves of the Moslim, and the blue belt of the Bosphorus, skirted by serais, hissars and innumerable little hamlets, animating the whole scene, winds beautifully between Asia and Europe —even Constantinople did not transport me so much as the first view of Rio de Janeiro. Neither Naples, nor Stambul, nor any other spot I have seen on earth, not even the Alhambra, can compare with the strange and magic charm of the entrance to this Bay. Wonders revealed themselves to our sight, the existence of which we had never imagined, and it was now clear why the first discoverers of this land gave to it the name of the New World.

We waited for the wind to bring the Frigate up to the anchorage, which was near at hand: all stood ready at the braces, for the command "Divisioni a posto" had long been given. Count Oriolla and Mr. Theremin had just left us in the third cutter for Rio. Darkness suddenly came on: no wind appeared to stir, but at the least breath the command was immediately given to brace the yards, and the shrill sound of the accompanying whistle gave the time. At length we perceived, by a

"Hulk" anchored further in the bay (the Brazilian guard-ship, I was told) that we were making progress. All stood watching eagerly the moment of letting go the anchor, tired of the faint breeze, which every instant seemed as if it would die away altogether, when we heard the music on board the English squadron, and the sound of the bells—the first sound that reached us from land—fell on our ear with a solemn tone. On high, above the spectral-looking mountains on the left, shone the four stars of the Southern Cross, beneath the two brilliant stars which guide the eye in discovering that constellation. Straight before us all was darkness; on the left extended a line of lights, ranging along the shore of Botafogo toward Rio, while to the right was seen the long line of lights of Praya Grande. The scent of the land reached us; it reminded me strongly of Iona (Icolmkill), where ten years before I stood by the graves of fifty kings. We fancied that we could hear the murmuring buz from the city, but this was rather by anticipation. The Hulk already lay at some distance behind us; I stood in the fore part of the ship, and looked forth into the darkness; nothing was to be seen, not a trace even of the ships in the roadstead.

On a sudden I heard Captain Scoffiero's voice; his patience seemed gone; the pipes sounded, and all the sails were at once braced. "Fondo!" A "stopper" still held the anchor; the axe was applied, and it fell with a loud noise, covering the waves with sparkling foam. At the words "Arriva Gabbieri!" all pressed round the

shrouds to haul in the sails. It was about eight o'clock, when we anchored in eighteen fathoms' water: in a quarter of an hour the yards were braced parallel, and all was so far in order that the crew could be allowed to disperse. I hastened down, to read my long-expected letters, and did not return to the quarter-deck until eleven o'clock, to enjoy the view of the beautiful starry heavens.

All was silent around: it seemed as if we had been transported, instead of from one quarter of the globe to another, from one planet to another. If nature can be so varied upon one small planet, how grand and manifold must the glory of the Creator be revealed in the millions that circle in the boundless realms of space! Powerful indeed was the impression which the first aspect of America produced upon us, and yet how much that was new still awaited us here!

I stood on the threshold of the immense continent of the New World, which still lay before me a deep unfathomed source of mystery—a mighty enigma. Imagination pictured to me the solitude of the endless primæval forests, and peopled them with all the forms of savage life, so attractive to us Europeans. I already anticipated a thousand perils and adventures, full of charm for a youthful spirit; and yet a regret mingled with my feelings, as if parting from a friend, when I thought back on the happy days I had passed on the glorious ocean: nevertheless the path to my home, to all whom I loved, leads back across those same azure waves!

September 6th.—On awaking my first glance rested

on the fort of Boa Viagem*, on the east side of the bay of Rio de Janeiro, crowning a picturesque headland, a mass of rock which appears dropped into the water like an island, close to the shore of the wide and lovely bay of Sacco de S. Francisco. The strange conical mountains of the east coast extended in the background, behind which the glowing orb of the sun rose, tinging the bright green waves of the bay with an orange glow. Beautiful and lovely as this picture was, framed by the port-hole of my cabin, I felt impelled to exchange the small chamber for the open air.

We were lying close to the charming island upon which stands Fort Villegagnon on a shelf of rock, washed by the foaming breakers, the gigantic fans of the cocoa-palms bending gracefully over the fortifications and houses, consequently just in the central point of view of all the glories of this wonderful Bay. The name of this insular fortress points to its French origin. Nicolas Durand de Villegagnon was an intrepid sailor, who conveyed Mary Queen of Scots in his squadron safely through the English cruisers, from Leith round Scotland to France. At a later period he originated the proposal to form a French colony in America, and obtained Coligny's support, on representing the real secret purpose of the undertaking to be the establishment of an asylum for the Huguenots beyond the seas. Through the influence of the Admiral he succeeded in obtaining from Henry the Second the necessary ships, with which in the

* So called from a church of pilgrimage for mariners which is built upon the spot—"Nossa Senhora de Boa Viagem."

year 1556 he arrived safely in the bay of Rio de Janeiro, where he erected a wooden fort upon the island that bears his name, which he called after his patron Fort Coligny. A more favourable spot for a colony the little band of Huguenots could not well have found: the circumstances of the time also were not unfavourable to them; for although the Gulf of Nitherohy had been discovered in the year 1532 by Martim Affonso de Souza, who, taking it for the mouth of a large river, named it Rio de Janeiro, the Portuguese had not as yet settled there. The natives were inimically disposed toward them, and easily to be won over by the French; added to which, the conscience of the Protestants felt little scruple about interfering with the pretended claims of Portugal, which were only founded on a decretal of the Pope*.

The new colony—"la France Antarctique," as the French named it—promised ample success, and the hopes raised upon it would in all probability have been realized, had not Villegagnon proved a traitor to his people. Won over by Cardinal de Guise, he threw off

* After Christopher Columbus found in 1492 to his great astonishment the line of no magnetic variation a hundred leagues west of the Azores, and in the Island of Guanahani discovered the fourth quarter of the globe, the hope was excited that much more land would be found toward the west, but at the same time the anxiety lest these discoveries should lead to great contention. A Bull issued by Pope Alexander VI. on the fourth of May, 1493, decreed, that all islands and continents already discovered and which should thereafter be discovered, lying east of a line one hundred leagues (*leuces*) south and west of the Azores and the Cape Verd islands, should belong to the kingdom of Portugal; but that any discovered

the cloak of Calvinism, and began to persecute his former fellow-believers in the most cruel manner, so that the majority returned to France. For four years the Portuguese left the French in undisturbed possession of the Bay; but in 1560 the Governor Mem de Sa attacked them in their stronghold, and, in spite of the support of the Tupinambas and Tamoyos, drove them from the island, carried off their guns, and destroyed the fortifications. The French who survived fled to the Tamoyos, in common with whom they waged war for a long period against the Portuguese.

I can touch but lightly on the glorious panorama which presented itself from the quarter-deck of the 'San Michele': to describe it is impossible, and I feel incapable of giving any picture that can even faintly recall the scene. Yet who that has gazed on the panorama of Rio de Janeiro can ever lose the impression it produces?

The bay of Nitherohy*, or Nictheroy (the old Indian name) stretches twenty nautical miles inland from south

west of this line should pertain to the kingdom of Castille. Alexander von Humboldt assigns the reason why this great oceanic boundary-line, instead of passing through Corvo or Flores, the two islands most west of the Azores, was drawn a hundred miles from that group, to the above-mentioned *magnetic* meridian of Columbus.—Compare Examen Critique de l'Histoire de la Géographie du Nouveau Continent, etc. par Alexandre de Humboldt, tom. III. pages 45–56. This line of demarcation could never reach Brazil, had not the Portuguese geographers Nuñez and Teixeira placed it many degrees too much east. Compare Von Feldner's Travels, etc., Part I. page 6.

* The word signifies "hidden water"—from *hy*, water, and *nithero*, concealed.

to north, in the form of a pear, widening to the breadth of eighteen nautical miles and three-quarters. On the south it is reduced to a narrow strait, about four nautical miles in length, which connects the bay with the ocean.

All the picturesquely formed mountains between which we had sailed yesterday were now grouped around the entrance of the bay, forming the high shores of the strait. On the west the group commenced with the two-capped Tijuca, rising gradually from a broad base on the shore. With this was connected the beautiful, arched ridge of the Corcovado, with its advanced spurs, behind which was seen the Gavia and the truncated mass of rock on its summit. Then followed the Sugarloaf, terminating this great mountain-range, which may be considered as connected with the Serra do Mar; the latter extends along the south coast of Brazil, and branching out in various directions passes from S. Paulo into the province of Rio de Janeiro. On the opposite side of the strait advance the last spurs of the eastern table-land of this province, and among the numerous cupolas and cones one steep and lofty ridge rises prominently, surmounted at its extremities by two cones, the Pico and the Lion's Head; upon it stands the dilapidated Fort do Pico, above Santa Cruz, which it covers on the land-side. These mountains extend on the east up to the river Parahyba do Sul; their declivity toward the sea follows the coast only as far as Lagoa de Saquarema; from whence the ridge of hills runs parallel to the coast at a greater distance, until between S. Fidelis and Cam-

pos dos Goaytacazes it reaches the lower course of that river. West of this line the table-land extends over the greater part of the province of Rio de Janeiro, bounded throughout on the north by the Parahyba. On the north side of the bay rises the Serra dos Orgãos, separating it from the Parahyba, on the left bank of which begins the mountainous land of Minas Geraes, rich in gold and diamonds, whose highest summits rise to about 5600 feet above the sea*. The picturesque range of the Orgãos mountains forms the highest elevation in the table-land of the province of Rio de Janeiro, and stretches, parallel to its general direction, from S.W. to N.E. Numerous little streams flow from its sides to the northern shore of the bay of Nitherohy; but the chief rivers, the Rio Macacú and the Rio de Iguassú, discharge themselves at the north-east and north-west corners of the bay, where two wide plains approach the shore, which separate the Orgãos from the other mountains on either side.

The weather was again foggy today, and the Serra was entirely hidden from our view, so that the north side of the bay appeared, as yesterday, a level surface with numerous islands in the foreground, among which was plainly discerned the long ridge of the Ilha do Governadõr. Nevertheless all the other mountains and hills which encompass the bay were seen from our anchorage with perfect distinctness in the beautiful light morning vapour.

* According to Mr. Mahlmann's map of America (Berlin 1835), the Itambé is 5590 feet high.

But let us descend from the heights to the shore, which is the true point of view for the picture. On the north-east foot of the great mountain-range, surmounted by the Corcovado and Tijuca,—at the point where the west coast of the bay, quitting its first northerly direction, turns sharply to the west,—in other words, where the strait ends and the glorious bay begins to open, rises the noble city of Rio de Janeiro*,—"a muita leal e heroica Cidade de São Sebastião do Rio de Janeiro," with its sea of roofs, churches, convents and towers, covering the picturesque terraces, the flat, short and steep plateaus, and the rocky projections of this corner, and occupying a wide and lovely valley, extending inland between charming hills,—truly an imperial city, full of beauty and majesty!

The city of Rio, with its numerous suburbs, embraces two sides (north and east) of the foot of the Corcovado, into the very defiles of which the adjacent villages rise picturesquely. Along the strand are seen rows of houses extending from the city as far as the Sugarloaf, and reflected in the waters of the bay; these are the white line of the suburbs of Largo da Ajuda, Praya da Gloria, Cattete and Praya do Flamengo, which stretch uninterruptedly up to the charming Botafogo, encircling that romantic bay whose narrow embouchure opens close to the foot of the Sugarloaf. Among the hills nearest to

* According to the Weimar Almanack for 1844, Rio has 160,000 inhabitants, but according to the Diccionario Geographico do Brazil of the year 1845, 170,000, of whom 60,000 were Brazilians, 25,000 foreigners, and 85,000 slaves.

the city and the strand, the Signal-hill and the lovely banana- and palm-hill, with the small white church of Nossa Senhora da Gloria, attract the eye prominently. The Signal-hill, called also Morro do Castello, is covered with trees and houses, among which stands the oldest church of Rio, S. Sebastião. Various-coloured flags hoisted on the mast and its yard-arm, at the top of the hill, signal the ships that arrive.

On the north point of Rio, the fortified island, Ilha das Cobras, rises out of the waves: it has the appearance of a steep projection of rock, upon which stand large buildings, and seen from our point of view formed a continuation of the city and the steep heights of S. Bento at its back. In the corner between the Ilha das Cobras and the east side of the city is the anchorage for coasting-vessels, especially Sumacas, a kind of schooner-brig, resembling those seen at Santa Cruz in Teneriffe.

On the north side of this little island is the roadstead for merchantmen, among which were some tall masts, apparently belonging to men-of-war. The naval arsenal, in front of which they were anchored, lies on the north side of S. Sebastião, at the foot of the convent of S. Bento; the military storehouse is situated near the south-east corner of the city, at the Ponta do Calabouço, which projects into the bay close to the foot of the Morro do Castello. Between the 'San Michele' and the city were anchored the English men-of-war, in the proper roadstead. Two-masted post-boats called "Falúas," with tall lateen sails and manned by blacks, were crossing

the bay in all directions; while long canoes rowed by negroes, or small ones carrying only one or two men, together with numerous ships entering and leaving the bay, and the boats belonging to the various cruisers, enlivened the beautiful expanse of water. Every hour a small steamer, and at all times in the day falúas, start for Nitherohy, a pretty little town lying opposite at a distance of three and a half nautical miles, and extending at the foot of lovely hills along the strand of the small bay of Praya Grande*. The point of this bay with Fort Gravatá at S. Domingos, narrows the strait to about two nautical miles, and separates the bay of Praya Grande from the southern, lovely bay of Sacco de S. Francisco, or "Three Fathoms Bay," above which I had from my cabin seen the sunrise.

Still narrower is the strait between Santa Cruz and S. Theodosio, where its width is only one nautical mile and a fifth. Near this entrance lies the insular fortress of Lagem with its submarine prisons, whilst Villegagnon is distant about two nautical miles and a half from Santa Cruz, and not quite one nautical mile from the city. The bay of Rio contains an archipelago of about eighty islands, which, like the surrounding coast, are clothed in the most glorious and fresh green; I will only mention the Ilha do Governadõr, the largest, and Paquetá, which is much visited.

* Praya Grande (large strand) is the collective name for all the villages which stretch along the shore of this bay. Nitherohy consequently forms a part of Praya Grande, and was for a long time called "Villa real da Praya Grande."

Before nine o'clock in the morning the Brazilian man-of-war lying in the roadstead hoisted the Prussian flag, and fired the customary royal salute of twenty-one guns; and about an hour afterwards the officer on duty summoned the boat which was to convey me ashore. It gave me a painful feeling of regret to part, although for only a few months, from the fine Frigate, on board of which I had passed so many happy days, and from her amiable and distinguished corps of officers, who had in every way established a claim to my respect and gratitude. We pushed off: the 'San Michele' and the British squadron manned their yards, the guns boomed forth their echoing salute, mingled with the hurrahs and "E viva!" of the crew. The smoke circled high in the air, surmounted by the white flag, with cross and eagle, which waved aloft; whilst between the columns of smoke, flying before the sea-breeze, was seen the line of coast backed by misty mountains, in shifting and smiling pictures.

I landed not far from the imperial castle at Rua Fresca, close to the Largo do Paço and opposite the Hotel Pharoux; the tall, obelisk fountain of Chafariz do Largo do Paço was on my right hand. A number of people had collected out of curiosity; the carriage was standing ready, and we quickly rolled off. Wherever I looked, negroes and mulattos were seen on all sides; they seem to constitute the greater part of the population; and although the features of the negroes were familiar to me from my Eastern travels, I had never before seen such a multitude of blacks collected; these, together

with the mixed races, gave a peculiar appearance to the whole scene. We drove at a quick pace through some wide and bustling streets, the houses of which with their high roofs reminded me again of Madeira; the shops in this part of the city did not strike me particularly, but we did not pass through any of the principal streets.

After first driving a little way through the city, we turned to the left, along the above-mentioned rows of houses on the strand. The immense crowns of the cocoa-palms and the gigantic leaves of the bananas rose above the garden-walls by the wayside, and through the latticed doors we caught peeps of the most exquisite flowers; but these very gardens soon intercepted our view of the sea. The steep Sugarloaf rose before us, and on our right the Corcovado. We now turned into a garden-gate, and a short, dark avenue of mango-trees, the thick crowns of which closed into a kind of arbour over our heads, led to a walled terrace, on the bushy hill-side, upon which stood the elegant villa that had been hired for me.

It is impossible to imagine a more charming spot than the "Chacara das Mangueiras" or "a Mangueira," as this villa is called from the magnificent dark-green mango-trees which give such an air of solemnity to its avenue. The views down from the terrace, from the verandah with its numerous windows, and from the bow-window facing the north and east, are unsurpassably beautiful. Two fine black cypresses stand upon the terrace, at the point where the flight of steps descends to the mango avenue,

and at the corners are two arbours; parterres, intersected with narrow paths, occupy the rest of this narrow plateau. In the distance, far over the gardens, houses and trees, the eye catches a view of the narrow, long, blue strip of the bay. Between the two cypresses, and over the dark-green carpet of the high-vaulted crowns of the mango avenue, is seen, set as it were in a frame which separates it from the rest of the view, one picture upon which the eye rests with peculiar pleasure,—the rock of Boa Viagem, with light-blue hills behind it, and two palm-trees gracefully bending their heads in front. To the right of the cypress on the south is a view of the mountainous east coast beyond Santa Cruz, and of the peninsula of S. Theodosio, where the small bay of Botafogo begins. Next follows the rocky cone of the Pão de Assucar, rising above the Morro do Flamengo, the outline of which is broken by slender palms and various kinds of tall trees, while the wooded acclivities of the Morro descend precipitously, in part like a wall of rock, to the narrow valley on the south near the villa. On the right of the Sugarloaf is seen the beautifully formed ridge of a mountain, connected with this conical hill. The narrow valley on the south is covered with houses, the roofs and gables of which stand out among the foliage; the fantastic branches of the North American pines*, looking like inverted fans of the palm-tree, rise high into the air, waving in the wind. In

* This was the name of the tree mentioned to me, which is said to have been introduced within a few years into the gardens around Rio.

the foreground, by the side of the stables belonging to the villa, stand a thick group of bananas clothed in the freshest green, but on the other hand there are scarcely any palms.

Turning our eyes to the dark cypresses on the east, and following the bay northward from Boa Viagem on the opposite shore, we see first Praya Grande, a long line of white houses backed by light-blue hills, like a string of pearls upon a turquoise ground, and bounded by the Morro da Armação. Further to the left the azure mirror of the bay disappears behind the tall houses and trees of the shore on this side, between which low hills rise in a pleasing, rounded outline, intercepting the view of the greater part of Rio, and depriving the city of the cool breath of the viração, or sea-breeze, which in this hot country may be regarded not only as a refreshment, but almost a necessary of life, at least for us Europeans. The Signal-hill, in the background of which are seen in clear weather the blue Orgãos mountains, rises above a depression between these hills; whilst a long and lofty mountain-crest, connected with the acclivities of the Corcovado, bounds the glorious valley on the north; the latter, opening on the left by the side of the Mangueira, is closed on the south by the wooded acclivities upon the last spur of which this villa is built. These hills also belong to the most advanced spurs of the Corcovado, which, with its sharp rocky summits, forms the background of the valley, clothed to its base with woods. A tract of meadow succeeds; on the other hand, the remaining space, as far as the opening of the valley, is

covered with the most splendid banana grove that can be imagined. The long mountain-ridge which bounds this lovely valley on the north forms, although but slightly curved, a noble line, surmounted by trees of fantastic forms, and numerous single palms, which stand out in sharp relief against the dark tropical sky. Its sides are only wooded in parts: here and there it descends in rocky walls or picturesque terraces and platforms, upon which stand detached buildings surrounded by beautiful gardens, some of them quite stately edifices. Below, from out the banana grove rises one tall, splendid palm, and several other lower ones: but the greatest ornament of this valley is the high-arched crown of an immense tree, resembling a colossal flower of a splendid red or violet, almost crimson colour, which is a prominent object in the landscape; while the valley extends in full exotic beauty and tropical luxuriance on the north of the villa; seen from the windows of my sleeping-room it presents an indescribable picture—one which I had now daily in view.

Scarcely had we taken luncheon, when the Minister of Foreign Affairs, Aureliano de Souza e Oliveira Coutinho, and the Mordomo of the Emperor, Paulo Barboza da Sylva, waited on me with an invitation from his Majesty to an audience at ten o'clock the next morning, and also to attend the anniversary of the independence of Brazil, which was to take place the same day. When these gentlemen left me, I could no longer resist my impatience to go out into the open air and survey the wonderful objects in the vicinity: the little hill behind

the house was ascended in quick time; I remarked that the mica in the granite rock which forms this acclivity appeared to be remarkably large-leaved.

The view from the top is even finer than that from the villa: on the terrace I could see every ship entering or leaving the bay, but at this point the eye follows the vessels further inland, and observes their entrance still more distinctly.

I wished to penetrate into the thicket of underwood which covers the acclivity, to reach the palms and the various fantastic trees, but in vain: the creepers scarcely allowed me to advance ten paces. I picked up a stick and walked down to the meadow, adjacent to the bananas. It was intersected by small ditches, in the mud of which a troop of naked negroes were wading about, cleaning them out, whilst a lazy white fellow sitting by, with a large straw hat and a stick in his hand, made a face as if he were overworking himself in the noonday heat. In the middle of the meadow stood a group of strange-looking trees, with a small garden close by, in which I observed many large and beautiful butterflies; one in particular, of iridescent colours, azure-blue bordered with black (the *Aëronauta nestor*), I shall never forget. I next went up to the red tree above-mentioned, and found that its leaves were crimson, and the thousands of flowers upon it were violet blossoms. Dr. Lippold considered it a *Nissolia*, darker and more violet than the *Sapucaja*.

On the road to the suburb of Rio I passed many half-naked, black women standing in a brook washing linen;

I also met a number of negroes, and hackney carriages drawn by mules, and driven by creoles or blacks drest in a blue coat with a red collar and high boots. This reminded me of the old Prussian livery, and it is in fact of Prussian origin, for the ex-Major von Suckow, the proprietor of all these carriages, was formerly in the Kaiser-Franz Grenadier regiment. After the war he quitted our service, and entered the German legion in Brazil; when the legion was disbanded he went back to Rio, where he established this hackney-coach trade, and got the whole horse and mule business of the metropolis into his hands: from that time no journey into the interior, no drive in the city, no ride into the country without Herr von Suckow! I met many negroes carrying glass boxes upon their heads, with all kinds of articles for sale, and also bundles of sugar-canes: the singing and roaring tones with which they offer their wares are strange and ludicrous. The sound of the breakers on the shore attracted me from the straight road,—I was delighted to find that my house was so near to the sea.

After dinner I walked out with Mr. Theremin, along the "Caminho Novo," to which my villa belongs, and which extends to within a short distance of Botafogo, until a turn on the left past the row of houses of Praya do Flamengo brought us to the shore. Here lay two of the canoes, formed of the hollowed trunks of trees, in which the negroes navigate the bay. From the strand we ascended a small hill—backed by the Sugarloaf—the Morro do Flamengo, on whose sides a quarry is cut in

the micaceous granite, called Pedreira de Botafogo. Negro-slaves were busy moving a huge stone with heavy crowbars, accompanying their work with a song to give the time; this seemed to be the chief part of the business, for half that number of European workmen would have done the task without the least difficulty. On the side of the Morro do Flamengo stood a mass of Tillandsias, and some tall cactuses with angular stems. The view of the bay of Rio de Janeiro from its summit is wonderfully fine.

At our feet lay the narrow entrance into the cove of Botafogo, which, like an enormous cleft, separates the Morro from the rugged side of the Pão de Assucar. We walked down the steep path to the shore of this small secluded bay—a little paradise! A semicircle of elegant villas, with beautiful flower-gardens, encloses it on the north and west sides, and on the other sides it is surrounded by luxuriant tropical wood scenery and mountains of the most glorious forms. In the east rises the Sugarloaf, pointing like a gigantic finger to the sky, and opposite to it the summit of the Corcovado looks threatening down from a giddy height upon the peaceful little bay, smooth as the surface of a lake. Botafogo is quite like a European bathing-place on the edge of the primæval forests,—a seaside summer resort of the diplomatic circles.

We set out to return. As the blood-red orb of the sun was sinking behind the mountains, the little leaves of a tall Mimosa by the roadside closed, just at the minute that the booming sound of the gun from the

'Commodore' reached us from the roadstead,—the signal for the British squadron to strike their flags and send down their top-gallant yards.

The short road to the villa led us again through the Caminho Novo. Orange-coloured flowers, called here Trombetas, covered in places the high garden-walls, behind which appeared the crowns of palm-trees and the jagged leaves of the bananas. In front of almost all the houses stands the straight-stemmed melon-tree, Mamoeira (*Carica Papaya*), a tree which bears a quantity of round green and yellow fruit, overshaded by a small vaulted roof of large palmated leaves.

The walk from Botafogo to my villa did not take a quarter of an hour, but it was dark, and the cicadas were chirping, when we reached the Chacara das Mangueiras. The sound which these Brazilian chirpers make is enough to split your ears; I can only, in miniature, compare it with the harsh, whistling sound of a railway engine at starting.

Before going to bed I again walked on to the terrace and through the avenue of mangos, to see the fireflies, which glittered upon the meadows on either side of the road. Their light reminded me strongly of the glow-worms that swarm about the traveller in Italy, especially in an evening, when I saw myriads of them moving about like little stars in the glens near Salerno: but the flies here came out in such quantities, that the meadow looked quite like a phosphorescent sea.

Before I pass to the description of the celebration of the "Dia da Independencia do Brasil," I may be per-

mitted to give a short sketch of the history of that widely extended empire, which will better explain the importance of this festival.

Scarcely had seven years elapsed after the first voyage of Columbus, when Vicente Yañez Pinzon, who had accompanied the intrepid discoverer of the New World as commander of the 'Niña' on that ever-memorable voyage, sailed again in December 1499 from Palos with four carvels, which he fitted out in company with his nephew Arias, to prosecute new discoveries. He passed the Cape Verd islands, then turned south and west, crossed the line, which no Spaniard had before passed, and on the 26th of January, 1500, came in sight of the long, rounded palm-hill of Cabo S. Agostinho, projecting from the cocoa-woods of the coast: this he named Cabo de Consolacion, and was thus the first discoverer of Brazil. He then turned northward, and following the line of coast, passed the mouth of the Amazon and arrived at the Orinoco, from whence he returned to Europe with the loss of two ships. But ere Pinzon reached the coast of Spain, the Portuguese had already taken possession of this new continent, which, as before remarked, the Pope had assigned to Portugal. Scarcely had Vasco de Gama, after the discovery of the passage to India round the Cape of Good Hope, safely entered the Tagus, when the king, Dom Manoel, equipped a

second squadron to sail for India, and gave the command of it to the Fidalgo Pedro Alvarez Cabral. Great ceremonies preceded the departure of the fleet, which took place on the 9th of March. Cabral first directed his course to the Cape Verd isles, in order to take in the necessary store of water, and then sailed west, to avoid the calms which had detained Diaz and Gama. It happened that storms and currents carried the Portuguese squadron so far west—according to their reckoning, 660 to 670 leagues from the above-mentioned islands—that on the 21st of April, Easter Tuesday, they observed masses of sea-wrack, the first indications of land. On the following morning they saw the first birds, "called Fourabuchos," and the same day, Wednesday evening, the 22nd of April, discovered land, "a large mountain, very high and rounded, with another chain of hills to the south, and wooded plains." Cabral named this mountain Monte Pascoal (Easter Mount), and the country, which he took for an island, Ilha da Vera Cruz (of the true Cross)*.

On the 23rd of April the Portuguese anchored opposite to the mouth of a river, but were compelled by stormy weather to set sail again the next morning. They steered ten leagues northward along the coast, and in 16° 27′ south latitude, ran into a large, safe harbour, which they named "Porto Seguro"—a name which it

* Compare the account given by Pedro Vaz de Caminha to the king Dom Manoel, of the discovery of Brazil, in Von Feldner's Travels, etc. vol. 2. pages 159–200. According to Southey, the Portuguese first named Brazil, "Ilha da Santa Cruz."

bears to the present day. Cabral staid here a short while, during which Mass was performed several times, and on these occasions little tin crosses were hung about the necks of the natives, and a large cross was erected on the shore: on the 5th of May he continued his voyage round the Cape toward Calicut, but at the same time despatched Gaspar de Lemos to Lisbon with the news of this unexpected discovery. Four ships of Cabral's squadron were lost in this passage round the Cape, and with them perished the discoverer of the Cape of Good Hope himself, Bartolomeo Diaz.

In the following year, 1501, King Dom Manoel sent Amerigo Vespucci, a Castilian whom he had taken into his service, with three ships to the new country, the coast of which he first saw in 5° south latitude (at Cabo Roque), and followed as far as 52°,—near the entrance of the Straits of Magellan. Had he prosecuted his voyage only 4° further south, the southern point of America would have been discovered*.

No sooner had the Portuguese landed, in 8° south latitude, near the present Pernambuco, than they witnessed the frightful spectacle of one of their countrymen roasted and eaten before their eyes—a miserable sight! and yet more lamentable is it to consider that even at the present day, after the lapse of three centuries, this horrible custom still exists among some tribes of Brazil. This first voyage lasted sixteen months, in which Amerigo Vespucci again came to Pinzon's Cabo de Consolacion, to which he gave the name of S. Agostinho; but

* Cape Horn lies in 55° 58′ 40″ south latitude.

he found neither the harbour of Porto Seguro, nor the cross erected by Cabral. On the other hand he is said by some to have discovered the Bahia de Todos os Santos, of which however Southey, in his celebrated History of Brazil, says nothing.

As early as the year 1503 Vespucci repeated the voyage, and established the first settlement on the soil of Brazil in 18° south latitude, and 35° west of the meridian of Lisbon, on the heights of the Abrolhos, in Espirito Santo. He erected here a fort, which he mounted with twelve guns, and garrisoned with twenty-four men, the sole survivors of the crew of his lost flag-ship.

No sooner had the Spaniards discovered the South Seas, than they despatched a squadron to explore their connection with the Atlantic, but especially with a view to forestal the Portuguese. On this voyage Juan Diaz de Solis discovered by chance, in the year 1515, the mouth of the river La Plata, the shores of which were soon after colonized by the Spaniards. The French also sought thus early to establish commercial dealings with Brazil; and, according to Southey, it was the French who in the year 1516 discovered the noble Bahia de Todos os Santos, in 13° south latitude, of which however the Portuguese under Christovão Jaques nearly at the same time took and retained possession.

During the first thirty years after the discovery of the Ilha da Vera Cruz, the Portuguese showed little interest in this newly acquired land; they appear to have sent thither yearly only two ships with emigrants, which brought wood and parrots as back-freight. It was

not until this period had elapsed that Dom João the Third began to divide the colony into Capitanias, each of which received a strip of the coast territory fifty leagues in length,—an allotment which however was not afterwards properly observed. Many large districts, stretching fifty leagues into the interior, were given to single families and persons as fiefs of the crown, and with almost unlimited dominion, even over the natives. As the sugar-cane, which was imported from Madeira, thrived well, they established sugar-plantations, which were cultivated by negro slaves from Congo or Angola, as well as by native slaves, procured by slave-hunting, or prisoners taken in war. At the same time they carried on smuggling in European manufactures with the Spanish silver countries.

The colonization excited in general little interest among the Portuguese, partly because the first settlements had not been attended with the rapid success expected, and partly because the more important and extensive conquests which were at that time prosecuted, attracted the public attention and drew colonists to India and Africa, by the allurement of gold and precious stones, which Brazil was not then supposed to offer. Thus it was that only expatriated Jews and criminals—and even these, especially the latter, very unwillingly—emigrated to Brazil, since no path was opened to them here, as in the bloody but glorious wars in India, to regain a position in society by deeds of valour in the field.

Although the newly discovered country was poor in the precious minerals, it displayed on the other hand a

great variety and fruitfulness in products of the vegetable kingdom. A certain kind of wood, which yielded a dye, was the first object that particularly attracted the attention of the new possessors. Amerigo Vespucci had already carried this to Portugal, and named it "Vercino." At a still earlier period a dye-wood, known by the name of Brasil, Bresil, and Bresilje, was procured from the East Indies, where, according to an old Nubian geographer who called it Batram, it grew in Sumatra. Whether this East Indian name was transferred to the dye-wood found in South America, or, as others suppose, the wood of the Ibiripitanga, which yields this bright-red colour, took its name from the word *braza*, red-hot coal or the glow of fire, or the French *brasiller*,—it is at all events certain that this wood had early the name of Brasil, and that the present name of the country, which it bore even in the time of King Dom Manoel, is derived from this source. In the year 1530, the Englishman, William Hawkins, who visited this country and took back with him to London one of the native kings, called it Brazil. A century later the central part of Brazil, where the first settlements lay, exclusively bore this name.

In the same year, 1530, Duarte Coelho Pereira laid the foundation of the present city of Pernambuco on the spot where a French factory had once stood. At the sight of the spot he is said to have exclaimed in rapture, "O linda situaçam para se fundar huma Villa!" (Oh what a beautiful place to found a city!) and hence the name of Olinda is said to have arisen. At this time

(1531) the first of the larger and more fixed settlements in the southern part of Brazil, S. Vicente on the beautiful gulf of Santos, was established by the Captain-General Martim Affonso de Souza, who, as we have seen, discovered in the same year the bay of Rio de Janeiro. He planted the sugar-cane, and introduced the breeding of cattle. The Fidalgo Pedro de Goes, who in 1531 received a grant of territory extending thirty leagues along the coast between S. Vicente and Espirito Santo, was less fortunate. He sailed to the mouth of the Paralyba do Sul, and found there the Goaytacazes, with whom he lived in peace for two years; a war afterwards broke out between them, and he was expelled. Ten years later the Spaniard Francisco Orellana made his adventurous voyage, and was the first who sailed down the Amazon river from Peru to its mouth; but of this more elsewhere.

We now come to a principal event in the history of Brazil. Up to this time the efforts of the Portuguese in South America wanted unity, the numerous Captains-General a common chief, and the country a centre. To remedy this want, Dom João the Third sent Thomé de Souza as his Lieutenant (Capitão Geral) to Brazil, invested him with judicial and civil powers, and appointed him over all the Captains-General. At the same time he commanded the new metropolis of Brazil to be erected on the magnificent Bahia de Todos os Santos, and named it S. Salvadõr. Thomé de Souza arrived at the place of his destination in the beginning of April, 1549. In three ships he carried over with him a thousand men,

of whom four hundred were *degradados*, criminals; the squadron was under the command of Pedro de Goes, who had been driven away by the Goaytacazes. But more important than all this warlike equipment was the small unpretending band of six men, who accompanied the Governor-General of Portugal,—the first Jesuits who set foot on the soil of Brazil, having at their head the Padre Manoel de Nobrega as the chief and most distinguished. The first and anxious desire of Dom João the Third, in his heart a pious though bigoted monarch, was to extend the blessings of Christianity to his new heathen subjects. As a friend and admirer of Loyola, and a zealous protector of the Society of Jesus, he joyfully opened to them the wide bounds of his transatlantic kingdom, and invited them to direct their efforts to enlighten the poor savages, who were still lost in the night of paganism,—darker even than the shades of their primæval forests. The residence of the Jesuits in this country, for more than a century, was not without beneficial results: they laboured with unwearied perseverance in the education of youth, took the poor and oppressed natives under their protection, and defended them against the cruel persecutions of the Portuguese. At the same time they sought to inspire the Indians with confidence, to accustom them to a settled mode of life, and by degrees to introduce among them civilization, and even to convert these former heathens and their descendants into a strong defence against their still savage neighbours. Every year they extended the net of their missions wider and wider, car-

rying civilization and humanity into countries where, without their agency, the savages would probably have lived in a state of war and cannibalism down to the present day. On the other hand it cannot be denied, that their motives were probably not always pure; and indeed the pernicious effects of their influence were insofar manifest, as they imposed shackles on the minds of the white population, succeeded in keeping the natives more or less in tutelage, and suppressing the free moral development of the people. Regarding their operations from the Christian point of view, it is natural to ask, whether their efforts for conversion were directed to the outward form, or to the inward mind; and the reply to this question may perhaps not be much more satisfactory than with respect to the conversions going on at the present day in many parts of Brazil, where baptism is degraded into a mere act of subjection to the crown, and no explanation of its meaning is ever thought of.

The city and fortress of S. Salvadõr arose quickly: the Tupinambas, the most powerful race of the aborigines, who possessed a large portion of the coast-region, themselves assisted in building this their future oppressor; so that as early as the year 1552, the first bishop appointed to Brazil, Dom Pedro Fernandez Sardinha, took possession of his see in Bahia.

Let us now cast a passing glance on the aborigines of Brazil. A chaos of names and contradictory accounts meets us on entering the very limit of this inquiry, and we feel an uncertainty at every step in its history. When the Portuguese discovered Brazil, its east coast was in-

habited almost exclusively by one race: these were the tribes of the Tupis, whom we meet with under various names, and whose common language is understood to the present day by the inhabitants of the coast from S. Paulo to Pará. The Jesuits, in their intercourse with the natives, derived great assistance from this so-called "lingoa geral"* on account of its general extension, and have left behind them an excellent grammar of it, written by the Padre Jozé de Anchieta. To the Tupi race belong, among many others, the Tupinambas (Tupinambazes) and the Tamóyos in the province of Rio de Janeiro. One of the few foreign races—perhaps the only one—who dwelt on the east coast among the tribes of the "lingoa geral" were the above-mentioned Goaytacazes: the plains of the lower Parahyba do Sul, where the city of S. Salvadõr now stands, are still called after them, "os Campos dos Goaytacazes." From this race, who have long disappeared, the Coroados, the Coropós†, and perhaps also the Puris‡ are descended, who are met with at the present day in the vicinity of the above-named river.

The first Europeans who visited the country met with the tradition among the Tupi tribes, that this large nation had come from the interior toward the coast, and had driven back to the interior another large tribe, the Tapuyas, whose hordes had possessed the coast territory

* Southey, History of Brazil, vol. 1. page 225. Spix and Martius, vol. 3. page 1093.

† Southey, vol. 2. page 599 *et seq.*

‡ Von Feldner's Travels, vol. 1. page 38.

before them. Whilst now the Tupi tribes were becoming gradually more and more thinned by the persecutions of the Portuguese, a large swarm of the Tapuyas gathered in the interior, parallel with the strip of coast from the mouth of the Rio de S. Francisco to Cabo Frio, and inundated the coast territory anew under the dreaded name of the Aymorés. Another opinion is that the Aymorés, the ancestors of the Botocudos (whom the Prince von Wied has described in so detailed and interesting a manner in the second volume of his celebrated work on Brazil), were a people of the south,—a supposition which is said to be confirmed by their large stature; while the important differences between their language and that of the Tapuyas appear to disprove their having any relationship with the latter. This is the opinion of Southey, whose account we have followed up to this point*.

The Portuguese historian Vasconcellos, on the contrary, divides all the tribes of Brazil into two classes, the Indios mansos (tame Indians), and the Tapuyas, or the savage hordes, hostile to the Europeans. With the first he classes all the Tupi tribes, while the latter, whose languages vary greatly among themselves, include all the rest†. Thus the Goaytacazes‡ and the Aymorés with

* Southey, vol. 1. pages 281 and 378.

† Southey, vol. 1. page 378.—Spix and Martius, vol. 2. page 752.—Maximilian Prince of Wied-Neuwied, Travels in Brazil, vol. 1. pages 28 and 35.—Denis, Résumé de l'Histoire du Brésil, pages 10–39.

‡ Maximilian Prince of Wied-Neuwied, Travels, vol. 1. page 119 *et seq.*

their descendants are comprised in this latter classification, which has gradually extended more and more. All the various opinions however agree in one point, that the savage hordes have in the course of time retreated further and further into the interior, before the persecutions and slave-hunts of the Portuguese, and that the last traces of the Tupi tribes especially are at this day met with far in the interior on the shores of the Amazon*. A wonderful apparition indeed! what interminable, toilsome migrations for these tribes, in small bands with their wives and children, across a continent covered with impenetrable forests, and what a contrast to the mounted hordes of the Huns, Goths and Tartars!

But we have anticipated the course of events; let us resume the thread of history. The result of Villegagnon's expedition, the expulsion of the French from the insular fortress in the gulf of Nitherohy, has been already related; and we have observed that the survivors joining the Tamóyos carried on war against the Portuguese for many years. But Brazil had a new misfortune to suffer,—the first fierce incursion of the Aymorés (before whom the Tupi tribes had retired) into the Portuguese colonies in Ilheos and Porto Seguro in 1560. A calamitous fate hung like a heavy cloud over Brazil, until the conquest on S. Sebastian's day, 1567, dispersed it. The victor, Mem de Sa, and his faithful companion Nobrega, who, like all the members of his Order, was on all occasions fearless of danger and

* Spix and Martius, vol. 1. pages 213–215, and vol. 3. page 1061.—Denis, Résumé de l'Histoire du Brésil, page 36.

ready to risk his life, founded Rio de Janeiro in the same year, and named it, in honour of their tutelary patron, S. Sebastião. Three years later, after the death of both these great men, Brazil was partitioned into two General-Capitanias; Luiz de Brito received the north with S. Salvadõr, and Dom Antonio Salema the south with the metropolis of S. Sebastião. It was reserved for the latter to give the death-blow to the combined French and Tamóyos: from eight to ten thousand men were slain on the field of battle or made prisoners. Happily for the colony this double sway did not last long, for after a few years one of the General-Capitanias ceased to exist.

The union of Portugal with Spain in 1580 was attended by the most lamentable consequences both to the mother-country with her colonies and Brazil; Spain even seemed purposely to neglect this large and fine possession of her subjugated rival. Brazil likewise, as a Spanish colony, was soon threatened and laid under contribution by the enemies of her new master. English freebooters, under Fenton, Withrington, Cavendish and Lancaster, carried on their traffic with more or less success on her coasts in the latter part of the sixteenth century. S. Vicente, Santos, the Reconcavo (Bahia) and Recife (Pernambuco) were laid waste by them, whilst in the beginning of the seventeenth century (1612) some French under Rasilly and Ravardière settled in Maranhão, and founded there a city upon an island at the mouth of the Meari, which, in honour of their sovereign, they named St. Louis; this was however captured three

years afterwards by the Portuguese Jeronymo Albuquerque. In the same year the Capitão Mor Francisco Caldeira de Castello Branco founded Nossa Senhora de Belem (the present Pará), at the southern embouchure of the Rio das Amazonas. Some years before (1608) Ceará had been declared a Capitania.

But these small advances in colonization were insufficient to indemnify Brazil for the losses which she suffered from the ensuing war with Holland, the formidable enemy of Spain and her colonies. Scarcely had the Dutch West-India Company been formed (1622), when two years afterwards it made a great attack on Brazil. We find the names of Willekens, Piet Hein and Vandort at the head of the sea and land forces which advanced upon Bahia, and took possession of S. Salvadõr almost without a blow. In the March following a Spanish-Portuguese fleet, under Don Fadrique de Toledo and Dom Manoel de Menezes, consisting of sixty-six ships with twelve thousand troops, appeared before Bahia de Todos os Santos,—an armada larger than had ever before crossed the line. Notwithstanding that the Dutch had materially strengthened the fortifications of S. Salvadõr, in spite of the ninety-two guns upon the ramparts (the new fort on the strand fired red-hot balls), and the ten men-of-war in the harbour, they found themselves compelled, by a mutiny which broke out among the troops of the garrison, to restore the important conquest to the enemy. Not long afterwards the Dutch flag was again victorious in these waters: the brave Piet Hein twice ran into the bay of S. Salvadõr (1626), in spite of the vigorous fire

of the enemy,—the first time with his flag-ship alone, which was sunk; he was however amply revenged by the capture of twelve of the enemy's vessels. On his return home the silver fleet of Mexico fell into his hands. Four years later Holland assembled a new force off the Cape Verd islands, under Hendrik Loncq and the admiral Peter Adrian, which was destined to make a second attack on Brazil. They took possession of Pernambuco in 1630, which thenceforth became the chief arsenal of the Dutch. In the course of the next five years the provinces of Pernambuco (Itamaráca), Parahyba and Rio Grande do Norte fell into the hands of the Dutch, who had also garrisoned Porto Calvo in Alagóas, but lost it again.

Count Johann Moritz of Nassau found the Dutch possessions in Brazil in this position, when in 1637 he received the command of them from the United Provinces of the Netherlands. He immediately retook possession of Porto Calvo, erected Fort Moritz on the S. Francisco, made an incursion into the province of Sergipe del Rey, and in the same year also reduced the province of Ceará. With equal activity and success he in the interim, which he mostly spent in Recife, undertook the important task of administration. The perfectly lawless condition of the colony and the abandoned life of the immigrants were reformed, and the numerous frauds and gross abuses stopped, which had hitherto impoverished the revenues of the country. The neglected sugar-plantations were sequestrated and sold as state property, culture and colonization were encouraged in every way, and even the ex-

pelled Portuguese were summoned to resume possession of their former property, under the dominion of Holland. Towns, fortifications and bridges were erected, churches and palaces built, gardens and plantations laid out; much was especially done for Pernambuco; whilst on the other side the great Stadtholder laboured with equal zeal to promote art and science.

Although in 1638 the fortune of war was less favourable to the Count than in the preceding year—his attempt on S. Salvador having entirely failed after a siege of forty days—he could nevertheless look back with pride and pleasure on the great colony, which, by the might of his arm, had already extended its power over six provinces,—Sergipe, Alagóas, Pernambuco, Parahyba, Rio Grande do Norte, and Ceará. The war was from this time carried on more by sea than land, and consisted chiefly in a mutual devastation of the territory and harbours along the coasts; until in 1640 a great and unexpected event, the separation of Portugal from Spain, put an end to the struggle for some time. Soon after João the Fourth of Braganza ascended the throne of Portugal, he concluded a truce with the Dutch for ten years, which however the latter broke in 1641 by the capture of S. Luiz de Maranhão; and the Count of Nassau had shortly before his recall, in 1644, also the mortification of being obliged to surrender this important place to the Portuguese. On the departure of the Count the Dutch colony lost its powerful head, its strong arm; instead of the wise moderation with which that great man had governed the country, acts of op-

pression of every kind were committed by the functionaries of the Company, which, embittered by the religious hatred against the heretical Dutch, gradually excited the Portuguese to rebellion. In the following year a general insurrection broke out in Dutch Brazil, headed by João Fernandez Vieira, who was soon joined by the new Governor-General Francisco Baretto de Menezes. From this time fortune turned against the Dutch, and their tottering power received a deadly blow from a defeat in the mountains of Guararapi near Pernambuco in 1648. The commencement of the war with Cromwell, added to all these misfortunes in South America, completed their downfall, and in 1654 they were expelled from Brazil, with the loss of their chief town Recife. Holland however did not cede all her claims on this country to the crown of Portugal until the Treaty of the Hague, in 1661, for four millions of cruzados, and meanwhile she effected rich conquests in the East Indies.

Although many outbreaks occurred among the natives, in consequence of the imposition of serfage, and quarrels arose with Spain from the establishment of the colony of S. Sacramento on the Rio de la Plata, opposite to Buenos Ayres (1679), which favoured smuggling, repose was at length in some degree restored to Brazil, after the suppression of the thirty years' Dutch invasion. A subject of vast interest, which had long been kept in the background, was now revived, namely the search of the precious metals in the interior of the country. The Paulistas—a mixed population, of whites, natives and the descendants of both (Mamelucos), who formed a kind of

independent republic in the neighbourhood of S. Paulo —had hitherto roamed the interior, penetrating to the limits of Mato Grosso and Goyaz, in search of treasure. At the close of the seventeenth century the Portuguese likewise began, and not without hope of success, to send expeditions with the same object into the interior of the present province of Minas. One of these met a troop of Paulistas, and both expeditions, it appears, discovered simultaneously, and almost together, the rich gold districts which were afterwards such an important source of wealth to the kingdom of Brazil. After long struggles between the Portuguese and Paulistas, the Government at length, in 1709, founded the new Capitania of Minas Geraes and S. Paulo, which however in the year 1720 was divided into two Capitanias.

Since Villegagnon's expulsion Rio de Janeiro had been spared the storms of war and foreign invasion; but now, after a lapse of more than 140 years, the French renewed their attempts upon this country. In the year 1710 M. du Clerc anchored off Guaratyba, twenty-seven nautical miles west of the entrance to the bay of Rio de Janeiro, landed with a thousand marines, and marched for seven days through the forests straight for the metropolis. He entered Rio on the west side, but was overpowered and taken prisoner. On the 12th of September in the following year* the celebrated Du Guay Trouin, favoured by a fog, forced the entrance of Rio de Janeiro with seven ships of the line and four frigates,

* Compare Eugène Sue, Histoire de la Marine Francaise, tom. 5. page 304, and Southey, History of Brazil, vol. 3. page 113.

but not without considerable loss, which he himself stated at 300 men. After bombarding the city throughout the night, he the next morning took possession of the Ilha das Cobras, with 500 men, then landed 2750 more troops and sailors, and immediately erected a battery upon the island; indeed the inactivity of the Portuguese Governor, Francisco de Castro de Moraes, even allowed him to erect another upon a peninsula on the shore. In the night of the 20–21st of September he opened such a deadly fire upon the city, during a violent thunder-storm, that at daybreak he saw himself in possession of the place without drawing a sword.

Du Guay Trouin was well-aware of the difficulty of his position, and the impossibility, notwithstanding the ready capitulation of the forts, of maintaining it for any continuance with his handful of men; nevertheless he was unwilling to leave the bay without reaping all the fruits of his victory. By threats he succeeded in bringing the Portuguese Governor, who had retreated to a fortified post a league distant from the city, to guarantee the payment of a very heavy contribution. The treaty was honestly fulfilled, although on the day after its conclusion considerable reinforcements joined the Portuguese, under the command of the Governor of S. Paulo and Minas, Antonio de Albuquerque Coelho de Carvalho, who had ordered each of his 1500 horsemen to take behind him one of the infantry. The French thus saw themselves obliged to embark again in the beginning of November, and on the 13th of that month to quit the bay, laden with rich booty.

In the year 1725 the first diamonds were found in the province of Minas, and from that time the mining operations, the gold- and diamond-washings, and the increase of the duties levied in the commercial and market towns (Registos) of the interior, engaged the principal attention of the Government, and very little was done for the civilization of the country. The Jesuits gradually tightened the bonds in which they held the immigrants and natives fettered; whilst the grandees, on the lands which the Crown had granted them, ruled with increasing despotism, and adventurers, sanctioned by the Government, undertook the conquest of unknown lands at their own cost. This not only led to many battles with the savages (as with the Botocudos, in 1767), but gradually laid the foundation to the hatred of the native Brazilians toward the Portuguese.

We now come to the time when the celebrated minister Pombal held the reins of power in Portugal. It was he who expelled the Jesuits in 1760, upon their arrogating excessive power, and in 1763 transferred the seat of the Viceroy from Bahia to Rio de Janeiro. After his fall and the death of the king Dom Jozé, S. Sacramento was ceded to Spain at the peace of S. Ildefonso in 1777: on the other hand the island of Santa Catharina was recovered, and the Punta de Castillos, as had been settled in the treaty of Madrid (1750), was fixed to be the most southern point of Brazil.

With the beginning of the present century, and the transference of the seat of the royal family of Portugal to Rio de Janeiro, commences a new æra in the history

of Brazil. When on the 29th of November, 1807, the advanced guard of Marshal Junot appeared on the heights of Lisbon, the Prince Regent, Dom João (afterwards Dom João the Sixth), who had seized the reins of government in the name of his deranged mother Dona Maria the First, embarked at the last moment on board a fleet consisting of eight ships of the line, four frigates, and twelve brigs, for Brazil: an English squadron accompanied him. A storm dispersed the fleet, and forced some of the ships to run into Bahia; but it at length anchored safely, on the 7th of March, 1808, in the roadstead of Rio de Janeiro.

On the arrival of the royal family the colony was speedily freed from the leading-strings of the mother-country, from the bondage in which Portugal had hitherto held this transatlantic fairyland. This change was chiefly effected by the celebrated royal decree of the 28th of January, 1808, throwing open to the ships of all nations the harbours of Brazil, which had been closed for centuries. Industry was from that moment emancipated, a national bank and an upper tribunal for all affairs of justice and finance were established, an academy for art and another for medicine decreed, the first printing-press introduced, the rich treasures of the royal library thrown open to the public,—in a word, institutions for the liberal sciences were called into existence, and at the same time numerous reforms effected in the administration of the government and laws. A consciousness of independence began to awaken in the nation: a new, vigorous and self-relying spirit pervaded the country,

prosperity rapidly advanced, and customs outgrown by time were laid aside. Foreigners, who had been almost denied admission to the soil of Brazil, now flocked thither in great numbers; while Portuguese of rank, and amongst them many adventurers, collected around the court of their native princely house, whose splendour flattered the Brazilian love of pomp, and whose liberality won the attachment of the nation, notwithstanding that the jealousy between the Brazilians and Portuguese increased from day to day. Even the erection of Brazil into a kingdom, like Portugal and Algarvia (1815), failed to stop this jealousy, which the short-lived insurrection that broke out in Pernambuco in 1817, in the second year of the government of Dom João the Sixth, manifested in the most decided manner. Two years after the proclamation (*acclamação*) of the King, which took place on the 5th of February 1818, the revolution broke out in Portugal, in August 1820, which excited such a powerful sympathy on the other side the ocean —and how could it be otherwise in a country which saw the old Spanish colonies in full insurrection all around, not to mention the example given by the United States in the preceding century?—that on the 26th of February, 1821, the Crown-Prince Dom Pedro de Alcantara, twenty-three years of age, proclaimed to the revolted populace of the metropolis, in his father's name, the royal assent to the Constitution, which the Portuguese Cortes should frame. On the 24th of April Dom João the Sixth embarked for Lisbon, after appointing the Crown-Prince Regent of Brazil and his Viceroy.

The Prince Regent soon saw himself in a most embarrassed position. The Provinces, summoned purposely by a decree of the Cortes of Lisbon, began to negotiate with the latter independently, so that Dom Pedro's sway in fact only extended over Rio de Janeiro and the adjoining provinces. To this trouble was added the insolvency of the Bank, and, to fill up the measure of embarrassment, new decrees of the Cortes continually appeared, which, from jealousy of the Prince Regent's growing influence, abolished the most important courts and institutions of the country granted by King Dom João, summoned Dom Pedro back to Portugal, and even ordered troops to be sent to Pernambuco and Rio de Janeiro. These hasty and extreme measures roused a spirit of resistance; the hostility of the two parties increased, and a single measure only was needed—that the rulers in Portugal should prohibit the importation of arms and ammunition into Brazil—to determine the powerful Colony to declare her absolute independence of the mother-country. Dom Pedro yielded to the persuasions of the municipality of the metropolis, on the 3rd of May, 1822, and placed himself at the head of the insurrection. On the 7th of September of that year, during a short excursion into the province of S. Paulo, he proclaimed on the banks of the Rio Ypiranga the independence of Brazil, and on the 12th of October, 1822, his birthday, upon the Campo de Santa Anna, assumed the title of "Emperador Constitucional e Defensor perpetuo do Brasil." On the 1st of December his coronation took place, and at the same time an assembly was convened to frame a

constitution for the kingdom. Lord Cochrane, who had previously commanded the Chili fleet, was induced to enter the Brazilian service: for a naval power was above all things necessary to the new State, to expel the Portuguese from the places on the coast, to reduce the extended coast-territory under the dominion of the Emperor, to restore rest, and to protect the country from any hostile attempts of Portugal. Cochrane organized a squadron with great expedition, consisting of one ship of the line, four frigates, one corvette and two fireships; he hoisted his flag on board the 'Dom Pedro I.' on the 21st of March, 1823, sailed from Rio on the 3rd of April, and returned thither on the 9th of November, after having defeated the Portuguese fleet, subjugated Bahia, Maranhão and Pará, and cleared the whole coast of hostile troops.

The Constituent Assembly had meanwhile by no means completed the project of a constitution; on the contrary they began gradually to assume a formidable and threatening attitude toward the Government, which caused the Emperor to dissolve the Assembly by force on the 13th of November. A new commission was appointed on the 26th of that month, which in the beginning of January, 1824, submitted to the Emperor a draft of a constitution, dated the 11th of December, 1823, which more accorded with his wishes, and was accepted by him and sworn to on the 25th of March. Most of the provinces gave in their adhesion to the new constitution; the north alone formed an exception, seduced by the example of Pernambuco; several of the coast provinces north of

that place revolted, and attempted to set up a "Confederação do Equador," with a republican form of government. General Francisco de Lima and Lord Cochrane however restored peace, which lasted until November. On the 29th of August, 1825, the treaty of peace was concluded with Portugal, which now recognized the independence of Brazil.

Nearly at the same time however fresh clouds gathered around the political hemisphere. In the Banda Oriental (Montevideo) or "Provincia Cisplatina," as it was called since its incorporation with the kingdom in the year 1823, an insurrection had broken out, which led to a conflict with the neighbouring state of Buenos Ayres, and at length in the year 1825 to a protracted war, which entailed an immense expense upon Brazil and yielded her little profit. This war lasted until the 28th of August, 1828, when it was ended by a treaty effected through the mediation of England, which declared the contested province independent, and gave her the choice, at the expiration of five years, either of joining one of the two contesting parties or remaining an independent state. Montevideo (Uruguay) subsequently chose the latter, as was to be anticipated.

Since the first session of the Chambers, on the 6th of May, 1826, the members of which had been already chosen in 1824 in accordance with the new constitution, these sessions were held annually until the year 1830, without any budget being settled or the means found to avert the threatening financial crisis. Meanwhile the disposition of the representatives of the nation grew

more disinclined to monarchical government. Partly it was that the members considered themselves personally aggrieved, partly that they thought the constitution endangered by the measures which the Government had taken for the suppression of an insurrection in Pernambuco. Their discontent indeed was so plainly declared, that, notwithstanding the state of peace, the army was still maintained on a war footing; but the especial cause of dissatisfaction was the unsuccessful mission of the Emperor's daughter, Dona Maria da Gloria (in whose favour he had resigned his claim to the Portuguese throne) to Europe, and the large sums which had been expended in her interest and for a purely Portuguese affair. The malcontents went even further, and accused the Emperor Dom Pedro of being in his heart more Portuguese than Brazilian.

The Chambers were dissolved on the 3rd of September, but again summoned on the 8th. Now for the first time a budget was declared*. The expenditure was restricted to the most necessary items, the army and the fleet were considerably reduced, and a new penal code was adopted. The liberal party had this time completely obtained the upper hand in both Chambers. Then came

* The Gotha Court-Calendar for 1846 gives the following statement for the year from July 31st 1843 to 1844, taken from the report laid before the Chamber of Deputies by the Finance Minister. Expenditure, 27,894,922,543 Reis. Revenue, 20,500,000,000 Reis; leaving a deficit of 7,394,922,543 Reis. An average of the years 1826 to 1829 gave—Expenditure, 19,271,645,000 Reis. Revenue, 13,808,928,000. Thus during the last fifteen years a considerable and nearly equal increase under both heads has taken place.

the news of the French revolution of July, which tended not a little to increase the dangerous excitement of the country. The state of Minas Geraes especially, in which the chief symptoms of discontent appeared, induced the Emperor to visit that province in person, accompanied by his second consort, the amiable Princess Amelie von Leuchtenberg, whom he had married in October 1829, three years after the death of his first wife, the Archduchess Leopoldine, who left behind her a son and two daughters. The cold reception he met with in Ouro Preto (formerly Villa Rica) induced the Emperor to make but a short stay: his return was celebrated by the Portuguese with rejoicings of all kinds, which led to quarrels with their opponents, who were however worsted. Highly incensed by this defeat of their party, twenty Deputies met in the metropolis, and had the audacity to call the Emperor to account in an impudent address couched in the most violent terms. The dismissal of the ministry was the consequence; but at the same time, and notwithstanding this measure, an open insurrection broke out in Minas, S. Paulo and Bahia. The revolutionary tendency daily acquired increasing sympathy throughout the whole kingdom, and even the officers and troops were soon seized with the spirit of revolt. Dom Pedro knew the desperate state of his position; he saw that the only hope for safety was in firmness. On the 6th of April the Emperor dissolved the ministry, whose composition he did not approve, and collected around him men devoted to his interest; but it was too late! Crowds of people assembled on the Campo de Santa

Anna, and demanded the recall of the dismissed ministry. At six o'clock in the evening three justices of the peace repaired to the palace of S. Christovão, and laid before the Emperor the demand of the people. "He would do all *for* the people, but nothing *by* the people," was the energetic answer of Dom Pedro, which was immediately the signal for the rebellious masses to take arms, and the open desertion of the military under the command of General Francisco de Lima to the revolutionary party. The Emperor, on being informed of this by an adjutant of the General, seized a pen at two o'clock in the morning, and wrote of his own accord the following memorable document, which he handed to that officer:—"In the exercise of the privilege which the Constitution gives me I hereby declare, that I abdicate the throne of my own free-will in favour of my beloved son Dom Pedro de Alcantara. Boa Vista*, the 7th of April, 1831, in the tenth year of the Independence of Brazil." The Emperor then dismissed his ministers, appointed Jozé Bonifacio de Andrada to the guardianship of his children, and embarked on board the English ship of the line the 'Warspite'†, never more to set foot on the soil of Brazil.

On the same morning Dom Pedro II. de Alcantara, not yet six years of age, was proclaimed Emperor, amidst the general acclamation of the people, and a new regency

* Usually called S. Christovão.

† Dom Pedro made the voyage on board the British twenty-six-gun frigate the 'Volage', and the French corvette 'La Seine' accompanied him.

nominated consisting of three members. This was succeeded in the year 1832 by a similar one, whereupon in 1835 the well-known Diego Antonio Feijo, (whose successor, in 1838, was Pedro de Araujo Lima) was appointed sole Regent. At the desire expressed by both Chambers, Dom Pedro, on the 23rd of July 1840, declared himself of age, and summoned a new ministry, including among the rest Aureliano de Souza e Oliveira Coutinho, who frankly told the youthful monarch the dangers that had threatened his empire, torn as it was by parties, from the republican tendencies and efforts of the different regencies.

How difficult indeed the position of the Emperor is, can alone be estimated from the numerous insurrections which, since the abdication of Dom Pedro the First, have broken out in the different provinces of the empire, and which still in part continued at the period of my visit. In the year 1835 the formidable Indian revolution in Pará took place; in the same year the insurrection in Rio Grande do Sul broke out; in 1837 occurred that of the negroes in Bahia; in 1839 the revolt in Maranhão, and in 1842 Minas and S. Paulo rebelled*.

Among the last important events were the coronation of the Emperor, on the 18th of July, the appointment of the Council of State on the 21st of November, 1841,

* All these insurrections are now quelled. The merit of having restored peace to Brazil belongs in the first place to General Baron Caxias, of the family of Lima e Silva, who finally suppressed the revolution in Rio Grande do Sul in 1845, and for this achievement was elevated by the Emperor on the 25th of March in that year to the title of Conde de Caxias.

the revisal of the penal code, and above all the betrothal of the Emperor with the Princess Theresa of Naples*.

We shall here close our historical sketch, which has extended to a much greater length than we had originally purposed: but we considered it necessary to form this historical bridge, in order to transport the reader to the following day, which without a knowledge of the past would have little interest. This may also be the proper place to offer a few general observations in reference to this transatlantic empire. The constitution of 1824 recognizes four powers: the *legislative*, which is administered by the general assembly, consisting of the Senate and the Chamber of Deputies,—the *moderative* and the *executive*, which are solely lodged in the hands of the Emperor,—and lastly the *judicial* power, which is quite distinct from the others. There has likewise existed, since 1834, in each of the eighteen provinces† a provincial assembly, whose office it is to watch over its particular interests. Each province has a president at

* The squadron despatched to convey the young Empress left Rio for Naples early in March, 1843. The marriage by proxy took place on the 30th of May, 1843, and the actual marriage was celebrated at Rio on the 4th of September in that year. By the birth of the Crown-Prince Dom Affonso Pedro, on the 23rd of February, 1845, the succession is secured to the male line; until then Dona Januaria, the present wife of the Count d'Aquila, was the presumptive-heiress to the crown.

† The names of the fifteen provinces which touch the coast are from south to north,—S. Pedro or Rio Grande do Sul, Santa Catharina, S. Paulo, Rio de Janeiro, Espirito Santo, Bahia, Sergipe, Alagoas, Pernambuco, Parahyba, Rio Grande do Norte, Ceará, Piauhy, Maranhão, Pará; and the names of the three provinces of the interior,—Minas Geraes, Goyaz, and Mato Grosso.

the head of its administration; its subdivisions are named Comarcas (districts), and these are again divided into Freguezias (dioceses).

To describe the boundaries of the Empire would lead us too far; we will only observe, that Brazil extends at the present time from 33° 47′ south to 4° 17′ north latitude, and from 34° 47′ to 69° 59′ west longitude, and covers an area of about 130,000 geographical square miles, equal to about three-fourths of Europe; whilst its population, not including the Indians living in a perfectly savage state, is estimated at about five millions*.

* There exists no official statement of the population of the country, with the exception of a few provinces, and the most recent estimates vary from seven to four millions; according to Von Feldner (vol. 1, page 43) the population of all classes appears to amount to not much more than three millions. Von Roon (Grundzüge der Erd- Völker- und Staatenkunde, Part III. Sect. II. page 1088.) states that of the population about thirty-five per cent. are free, and sixty-five per cent. slaves, and that these are divided according to their chief elements:—

1. Whites (Brazilians, i. e. Creoles, Portuguese, Germans, etc.)		1,000,000
2. Negroes		3,116,000
Free	180,000	
Slaves	2,936,000	
3. Mestizos and Mulattoes		1,009,000
Free	600,000	
Slaves	409,000	
Total		5,125,000
4. Indians		1,990,000
Under subjection	360,000	
Independent	1,630,000	
Total population of the country		7,115,000

September 7th.—Soon after nine o'clock this morning an imperial state-carriage, harnessed with four mules and attended by servants in livery, drew up before my residence. The imperial livery is green and gold; the outriders wore large boots and three-cornered hats; the reins are also green, ornamented with little gilt stars. A body of cavalry of the line, in dark-blue jackets with red collars, drew up to form an escort, and the Chamberlain De Werna Magalhães came to accompany me to an audience of the Emperor. We rolled quickly along the same road by which we had yesterday entered the city. The high double arches of the aqueduct, which I had seen in Mr. Theremin's sketches, bridged the street before us, and I recognized the beautiful bananas growing among the houses, over which the mighty aqueduct stretches far away. At a brisk trot we passed under the aqueduct into the heart of the city. The crowds in the streets gave indications of the great festal day—the day on which, twenty years before, Brazil had declared her independence. The cavalry of the National Guard, in uniforms of green with yellow collars, formed in the streets, and single horsemen were seen mounting with the help of their negro attendants. We now arrived at the wide, somewhat desolate-looking square of Santa Anna, called also the Campo da Honra or Campo da Acclamação,—the same in which Dom Pedro the First was proclaimed Emperor of Brazil,—and gradually came again out of the city. The fine high-road leads over an extensive tract of marsh and fields covered with rushes and encompassed by wooded hills. Upon one

of these, on the right of the road, I saw a perpendicular granite rock, apparently traversed with veins of quartz. Large, black Urubús flew circling over the marshes. This valley is watered by small arms of the sea or canals, connected with the bay, the surface of which I also discerned after a time in an open tract of country on my right. Upon a steep acclivity on the shore stands a large white building, named the hospital "dos Lazaros." We were soon again in the midst of houses and gardens, surrounded by tropical plants which excited our admiration. A peculiar tall shrub, frequently growing to the size of a tree, especially attracted my notice by its splendid, scarlet flowers, larger even than roses: it was a tree-like Camelia. It brought the Chinese tapestry to my mind; I had always laughed at the strange figures, the fabulous trees with flowers, depicted on that work; but I now saw such trees actually in existence.

A green square, ornamented with flags, lay on the left of the road, upon which was pitched a large tent; great multitudes of people had collected, and were awaiting the ceremony, at which the Emperor was to assist in person, and to which I was also invited, of laying the foundation-stone of an imperial institution for the orphan daughters of faithful servants of the State. This was to take place in an hour. An instant afterwards we turned into the gates of a park, and a short avenue led straight to the imperial palace of S. Christovão; a two-storied building, with two wings in the course of erection—a proof that the palace has insufficient accommodation for

the imperial residence—stood before us, with a large basin and fountain in front. Two winding flights of steps outside the building, upon which were groups of persons in uniform and court-dress, led up to the chief entrance. All the Ministers and the Court came to meet me at the door of the carriage, and conducted me through several apartments to the Emperor, who, standing in the middle of the Audience-chamber, received me in a very gracious manner. I handed to his Majesty the letter from my most gracious Sovereign, accompanied by the insignia of the Order of the Black Eagle. The Emperor accepted the Order with evident pleasure, and expressed his thanks for the royal present in a few words, saying how happy this proof of the friendship of his royal brother made him. His Majesty then added in the most gracious manner, that he was pleased to create me a Knight of the most honourable Order of the Southern Cross. Delighted at receiving this proof of imperial favour, I immediately put on the new Order and the blue ribbon, and then followed the Emperor into a more retired apartment, where his Majesty sat down and conversed with me in the most friendly manner upon the plan and objects of my journey.

Dom Pedro the Second is remarkably advanced in mental vigour and acquirements for his age; he is of small stature, and rather stout, with a largish head, blond hair, and well-formed features; his blue, speaking eye expresses earnestness and benevolence. Although only seventeen years old he has the gravity of deport-

ment of a full-grown man. He evinces great pleasure in the advancement and acquisition of knowledge, and has pursued every branch thoroughly. History is his favourite study, although he takes an interest in various other subjects, and among the rest botany. The young Sovereign likewise manifests great talent in art, in painting; and here the earnestness of his character is seen, his interest in all that is great and noble, for he generally chooses as the subjects of his pencil the portraits of great rulers, celebrated in history, whose example he desires to emulate.

The Emperor rises as early as six o'clock in the morning, and devotes himself to the affairs of state: a great portion of his spare time is spent in reading, in which an excellent memory assists him greatly. There is a noble spirit of ambition in the youthful Emperor, to educate himself more and more for his exalted but difficult station,—an ambition which we cannot but respect and admire. What a happiness for this beautiful country to be governed by a ruler who knows so perfectly the duties of his position, and has such an earnest desire to make his people happy! May Heaven grant its blessing on his efforts!

His Majesty wore a dark-blue uniform, embroidered on the seams, with a collar and cuffs of the same colour and a white lining; over this, in the Portuguese fashion, a band composed of the ribbons of several different Orders with the Southern Cross, upon his breast three stars, and the Golden Fleece with large brilliants around his neck outside the collar. The gold epaulets with long,

heavy tassels, were ornamented with the arms of Brazil. At his side hung a golden sword, upon a white and gold belt, with a light-blue enamelled hilt, upon which was the Southern Cross in brilliants. His crimson silk sash was completely covered by the sword-belt, the gold tassels alone hanging down in front on the gold-embroidered Hungarian knot, over long white casimir trowsers, ornamented on the sides with broad gold stripes. A three-cornered, black velvet hat completed the costume.

At the close of our conversation the Emperor graciously presented me to his sisters. Both Princesses are fair, like their brother, but rather older; both pretty, especially the younger, Dona Francisca, now the Princess de Joinville. They wore green and gold robes, embroidered with small stars and spheres, and birds formed of brilliants in their hair. Each had the star of the Southern Cross, and the ribbon of an Order composed of several others. The ladies of honour were dressed in similar robes, every one here being clad in green and gold,—chamberlains, ministers, and indeed the whole court from first to last.

After awhile we all repaired to the fore part of the palace. The state carriages drove up in front. My six-windowed carriage was the first, then came Dona Francisca's, then Dona Januaria's, then the Emperor's. In this order the procession started, accompanied by a squadron of National Guards as an escort to the Emperor, and many court carriages. On our arrival at the spot where the ceremony of laying the stone

was to take place, the diplomatic corps, the clergy, the naval and military officers of rank, the municipality, etc. were already collected under the tent. When the Emperor appeared, a short religious service commenced. His Majesty pointed to me a place on his right hand, while his two sisters stood on his left according to their age: this is the order invariably observed in all ceremonies. The Bishop of Chrysopolis, his Majesty's former tutor, consecrated the foundation-stone, which was suspended from two elegant polyspasts; the Emperor himself laid it.

The procession returned slowly in the same order, but considerably increased, to the city. The large Urubús circled aloft overhead, and crowds of negro-slaves, with here and there dark-coloured Indians dressed like Europeans, and the black drivers of the heavy oxen-waggons, stared at and greeted the procession of carriages. With European pomp it proceeded on its way, under a burning sun and enveloped in thick clouds of dust, passing clear rivulets, in which stood clumsy half-naked female slaves busy washing, slender palms, large-leaved bananas, trees with red flowers, marvellous exotic plants and lovely wooded hills.

The streets of Rio were filled with people; at all the corners were gathered groups of black slaves, to greet the Emperor; all shades of colour were here seen collected, from the negro and mulatto to the half-brown or white dandy. Out of the windows and over the half-doors at the entrance of the houses, hung crimson silk shawls, and over these generally smaller ones of

white stuff. In the background stood smart fat mulatto women, black nursemaids, and the elegant white ladies of Rio, who for the most part appear to be very kindly treated by nature. Black hair and eyes predominate, but here and there the fair complexion had a somewhat equivocal, almost brownish tint.

Several battalions of the National Guard were drawn up on the Campo de Santa Anna, and presented arms, whilst the music played. Whites, mulattoes, and free negroes stood promiscuously in rows. At length we reached the Quay: all the merchantmen, coasters and men-of-war in the roadstead were drest out with flags. The procession stopped before the palace, on the Largo do Paço, the square with the obelisk fountain. In the vestibule was a throng of gentlemen of the court, chamberlains, and archeiros (archer-guards) clad in green and gold, with tall halberds, to receive the Emperor. We all went up into an apartment with light-blue decorations, from the balcony of which is the finest view of the roadstead. Among the numerous streamers floating in the breeze, I observed with a feeling of joy the Prussian flag.

After a short pause the Emperor went to Mass. The way to the royal chapel led through several saloons and long corridors. The Brazilian flags worked in cloth, or rather green cloth hangings embroidered with the Brazilian arms in the old Portuguese fashion, serve here, as at S. Christovão, for door-curtains. In general the apartments of the imperial palace are decorated in a simple style. In former times this building was the

seat of the Portuguese viceroys; the Emperor now only lives in it for a short time, as his chief residence is S. Christovão.

On entering the church I received a hint to follow the Princesses to the tribune on the right side. The box was closed with a crimson silk curtain, which was immediately undrawn, when the two exalted ladies had placed themselves behind their kneeling-cushions. At the same time the Emperor, followed by the whole court, entered the church, knelt before the altar, and then took his place under the canopy opposite to his sisters. The Bishop of Chrysopolis performed Mass, with the accompaniment of vocal and instrumental music: when it was ended, the procession returned the same way to the throne-room. The Emperor approached the window. The National Guards were drawn up in front of the palace; they were formed into appropriate bodies, and had a field-train of six guns of different calibres. The Emperor was received with the usual honours, amidst shouts of "Viva o Imperador!" Presently I heard, to my no small astonishment, a well-known sound,—*our* signal to charge, upon which salvos were fired by three battalions of infantry and twenty-one guns from the battery. After each of the volleys the Emperor gave the sign with a handkerchief to stop firing.

The uniforms of the infantry have a similar cut to those of the English riflemen; they are dark-blue with light-green half-collars and turned up with yellow, the tschakos and muskets are quite English: the officers also wear dark-red silk sashes. The cavalry and artillery of the

National Guard are clad in the same colours, but the artillery of the line have black collars with crimson facings. The National Guards looked very well, and, regarded as a militia, displayed a creditable military deportment and a fair share of discipline. They performed garrison duty at this time in Rio de Janeiro, the metropolis being almost deserted by the troops of the line, who were just now concentrated in the provinces of Minas and Rio Grande do Sul, to suppress the insurrection which had broken out there. I had also today an opportunity of offering to the Emperor my congratulations upon a victory which the arms of his Majesty had just obtained in Minas under General Baron Caxias, the consequences of which were soon decisive.

The troops defiled before the palace in detachments, and thus ended this short review. Cannoniers—almost all whites—drew the guns instead of horses, eight to twelve men being harnessed to each. When the troops had passed, the Emperor left the window and took his place with his two sisters on the top step under the green velvet throne-canopy, whilst the Court ranged themselves on each side; the English Ambassador presented the new Governor of the Mauritius, General Sir William Gomm, whose acquaintance I had made in Madeira. Mr. Hamilton afterwards appeared, at the head of the diplomatic corps, and read the address to the Emperor in the name of that body, congratulating his Majesty on the anniversary of this important day. After the Emperor had returned an answer to the address, the diplomatic corps retired, walking backwards to the door,

as is the custom likewise in England. The military and civil authorities now advanced in different corps, to kiss hands, and it had a most strange appearance, when an old negro officer (known in Rio by the name of "Bonaparte") and several mulattos kissed the white hands of the Princesses. Lastly were presented a numerous deputation from a scientific society.

As soon as this ceremony—rather a fatiguing one under such a tropical heat—was ended, the Emperor went back to the light-blue apartment. Here we separated for half an hour, after which the Court assembled again at dinner. One interesting thing I remarked at this dinner, that the ice had been brought from North America, and consequently had passed the line. But a short time ago this luxury, doubly salubrious and refreshing in a hot climate, was unknown here, the North American ice having been imported only within the last four or five years.

On my return from the city to my country villa I passed a spring, at which the negroes with their pails and pitchers stood ranged in two rows under the inspection of the police. The reason of this regulation was said to be that at this time there was a scarcity of water in the city.

At eight o'clock in the evening I repaired to the large Theatro de S. Pedro de Alcantara, where the Emperor was expected. As soon as his Majesty arrived, and had taken his place on the platform set apart for the seats of the Imperial Family, his sisters standing on his left hand, the curtain of the box was undrawn, and the band

struck up the national hymn amid loud acclamations. Hardly were these silenced, when a gentleman in a black dress-coat leaned out of his box, and recited aloud to the Emperor with great animation a poem upon the festival that had taken place this day; four others followed his example, some of whom seemed to have learned their task by heart imperfectly: at last one of the National Guards declaimed his poetical effusion from the upper circle: the overture then began. At the conclusion of the first part the Emperor sat down, and when it was ended his Majesty retired with all the Court into a small anteroom for conversation, the Princesses going to and fro from one to the other. The Emperor did not return to his box until the ballet, at the conclusion of the performance, when he resumed his place upon the platform. The house is spacious and well-lighted, but the ballet did not please me much. I must not however omit to notice one amusing sport of nature in the ballet corps,—several mulatto ladies with white, flesh-coloured legs, and one man with a long tunic which gave him all the air of a clumsy woman.

September 8th.—This morning at ten o'clock the Emperor surprized me with a gracious visit, and remained for an hour and half, most of the time in the verandah, conversing in a very affable manner on a variety of subjects. His Majesty also presented to me in the kindest manner two very pretty Daguerreotype views of S. Christovão, taken by a foreign artist, which he had mentioned to me yesterday. The Emperor has himself

made many experiments with the Daguerreotype, and expressed his opinion that chance has a great share in this process, in which I quite concur: I have myself taken great pains to produce something with the Daguerreotype, but in vain. Count Oriolla made the last attempt with my apparatus in the Alhambra, but he entirely failed, as a part of the quicksilver had, by the jolting of the Malaga diligence, been spilled upon the plates.

Today I experienced the first instance of the idleness and negligence of the negroes. A black was despatched to the 'San Michele' before eight o'clock, to announce that I should be happy to receive at two o'clock on board the frigate the Officers of the British squadron, who had sent to intimate their desire to call on me. When I arrived on board, shortly before the appointed time, I found that the messenger had preceded me scarcely a quarter of an hour. The utmost time that could be required for this errand was from two to three hours, whereas he had been gone at least five. One great cause of this laziness lies in the irresistible attraction of the "Vendas de Caxaça" (spirit-shops) to all blacks. We shall hereafter see how other points of the negro's character likewise conduce to give him this slothful habitude.

Notwithstanding such a late invitation the English Officers soon paid a visit to the Frigate. On this occasion Commodore Purvis had the kindness to offer me the service of the steamship the 'Growler' for my voyage to Pará, knowing that it was my intention to visit that province.

The offer was in every respect welcome to me, and I hailed with pleasure this first opportunity of availing myself of the service of a British man-of-war, the English Admiralty having shown me so many instances of courtesy, which I had been hitherto prevented by circumstances from accepting. Among the rest, the 'Malabar,' of seventy-two guns, had received instructions on her departure from England to place herself at my service in case she fell in with me at Madeira, as likewise the 'Talbot' of twenty-six guns. I had the pleasure today of making the acquaintance, among the other Officers, of the Captain of the 'Malabar,' Sir George Sartorius, Dona Maria's victorious admiral. They were all full of a comical scene which occurred yesterday. Whilst the 'San Michele' and the 'Satellite' were awaiting in the roadstead of La Santa Cruz de Teneriffa my return from the Peak, an English frigate, which had likewise come from Funchal, passed them: she was celebrated as a fast sailer in the fleet, and had jestingly inquired of the corvette whether she had any commands for Rio. The Captain of the frigate, in the expectation of meeting a quartering wind south of the Equator, and thence to be carried with a flowing-sheet to Cabo Frio, held his course so far east on the northern hemisphere, that he reached 11° longitude west of Greenwich, whilst we cut the line in 24° 57′ 36″. Yesterday, when the important moment arrived of entering the Bay, and all the telescopes on board the British cruiser were in activity, the officer on watch suddenly announced that he descried the Sardinian frigate among the men-of-war lying in the roads.

At this news the Captain put on a serious face; presently a second gratifying announcement was made,—the 'Satellite' was likewise seen anchored off Rio,—he could restrain himself no longer, and the storm broke out. It was disheartening to see himself so out in his reckoning, and yet highly amusing to the bystanders. He who attempts too much, often attains nothing—and so it is with the trade-wind, which sometimes leaves the sailor in the lurch.

I returned to the Mangueira full of delight at this settled prospect for my projected expedition to the Rio das Amazonas. Had it not been for the 'Growler,' I should have had to regulate my plans by the times of departure of the Brazilian steamer, which since 1839 had sailed monthly for Pará, and should have been obliged to spend four weeks on board the packet, instead of, as now, making the voyage in about a fortnight in the most interesting manner, and being consequently enabled to give the rest of the time to my river expedition: this was an important consideration.

September 9th.—I availed myself of a bright, cool morning to take a short walk to that paradise of a spot Botafogo, and was in perfect delight with the glorious aspect of nature and the variety of exotic trees and plants in the gardens. In the afternoon I walked with Mr. Theremin into the narrow valley behind the "red tree," called Laranjeiras, which extends to the foot of the Corcovado. The Rio das Laranjeiras, a brook in which a number of negresses were washing linen under thick groups of bananas,—the little village of

Cosmo Velho, with its pretty houses shaded by high trees, together with the thick woods on the acclivities intermixed with tall stems, the type even here of the primaeval forests,—render Laranjeiras a charming walk. In this valley I learned much that was new to me; here I saw for the first time one of the troops of little brown ants, which issuing from a house in the road, pursued its way in a straight line across the path. What a busy throng—what restless activity! The little animals, heavily laden, formed different streams, running parallel in opposite directions; it is enough to make one giddy to look long at them. Each ant is dragging something—not one is idle; and thus they go straight on, through or over whatever lies in their path. The little white ants or Termites, here called Cupim, are more mischievous; during my absence of three weeks from the Mangueira, they made their way into my chest of drawers, through the greater part of my linen—and luckily out again—so that I could distinctly trace their path.

At the entrance of the valley, beside the first detached houses, stand some tall trees, spreading their branches and vaulted crowns (formed, not of leaves, but of yellow blossoms) high over the shrubs and bushes growing on the edge of the little green meadow. Here I saw the first Cadeirinha, the old-fashioned palanquin, borne past by negroes. My guide showed me the first Orchideæ and the ananas-like Tillandsias, growing up aloft on the branches of the large trees, or appearing to sprout from their trunk. On the deep bed of the Rio das

Laranjeiras, the rivulet which runs through the valley, I observed another strange and fantastic object,—a long, hairy-looking trunk, stretching its huge branches over the stream, from which hung down a kind of Tillandsia in long tufts like horses' tails. Other trees bore bunches of a sort of woolly beard-moss on their branches. On the edge of the primæval forests of the Corcovado was seen here and there brilliant silvery foliage intermingled with the green, which reminded me involuntarily of the "patriarch with the silver beard," that venerable trunk with its silvery roof of foliage and beard floating in the wind, beneath whose shade fearful scenes of murder were perpetrated, which I had read of in an exciting story during an illness last winter, and which often haunted me when suffering from attacks of fever. There are likewise palms here, and, as the name of the valley indicates, orange-trees, which are called in Portuguese Laranjeiras.

We extended our walk a little further, beyond the chalybeate spring at the end of Laranjeiras, called "Aguas ferreas"—the usual object of attraction to the inhabitants of Rio in their walks: on our return, the cicadas, those dear little creatures, which seem to be particularly in voice at night, filled the air with their noise, and darkness set in ere we reached the Mangueira.

September 10*th*.—This morning I and my guide were early in our saddles; following the line of suburbs, we rode along the strand to the commencement of the city, the most charming spot on the whole shore of Rio: then, leaving on our right the lovely hill of the Gloria with

its little church, its splendid palms and bananas—an exquisite scene, which must be witnessed to be conceived credible—we passed under Santa Theresa, the other hill on the left, with its church, visible from afar, up to the "Aqueducto."

We now arrived at the heights, where the double row of arches of the aqueduct is rooted in the mountains, and came to a footpath, following the low wall which conducts the water down from the mountains to the antique-looking aqueduct. The prospect over the bay, the view of Rio, with its suburbs of Matacavallos and Rio Comprido far below in the charming valleys on the acclivities of the Corcovado, and lastly the wide, smiling plain of S. Christovão at our feet, formed a picture which no words can describe. And what vegetation surrounded us on this excursion, —numbers of the finest palms, Mimosas, Mamoeiras, and innumerable species of trees wholly new to us! One tree in particular, of frequent occurrence, was remarkable for its beauty, with dark-green foliage and blue blossoms, like the periwinkle, only passing rather more into lilac. It is strange how often we meet with trees here which have so exactly the form of pines as to be indistinguishable from them, until on approaching them we perceive that they have no needles. All around Rio the trees present a thick mass of foliage, excepting the North American pine, which is seen in many places. Such a variety of green is never found together in Europe.

The path led gradually into the thicket, and we looked

down the steep declivity on the left in the direction of Laranjeiras. Masses of lianas hung from the branches, and interlaced the trees so closely that the forest was often impenetrable, while the underwood by the wayside shut out all prospect like a wall. Here and there a colossal Tillandsia peeped out of the thickly tangled bushes, its heavy, pointed leaves hanging far down, not like the leaves of a pine-apple, but those of an aloe. When at length the view opened on to the valley, I was astonished at the gigantic stems of the trees, which rose up to us straight as a taper, their light vaulted crowns reaching to the elevation at which we stood. The aqueduct terminates in the midst of this impervious thicket, at a shelf of rock from which the fresh spring gushes. Beautiful, large butterflies of various colours were flying about. The path, on which the horses continually slipped, now led down to the first houses of Laranjeiras, through a thick shrubbery of exotics, which enveloped us in a delicious perfume as if stepping into a hothouse, whilst the gigantic yellow crowns of the trees at the entrance of the valley looked like old acquaintances.

I took a luncheon at home, and then mounting Theremin's horse (for mine seemed to have done work enough for the day) I galloped toward Botafogo. Early in the morning there had been a considerable mist, which had gradually increased; but so many new and strange objects by the roadside were continually attracting my attention, that I could well dispense with the pleasure of an extensive prospect; a walk or ride

into the open air always repays itself. Following the semicircle of this little hamlet, my way led round the small bay, and then off to the right along the straight road lined with houses, the Rua de S. Clemente, until on arriving at the "Lagoa" I slackened my pace. Some groups of houses, shaded by palms and thick foliage, reflected in the little lake, presented lovely pictures. Without perceiving it I rode past the Botanic Garden, and came to a marshy tract, where a pleasurable surprize awaited me. Isolated groups of reeds twenty to thirty feet in circumference rose from the meadow, like sheaves of lances thirty to forty feet in height, and each only a few inches thick, whose waving elastic tops moved to and fro with indescribable grace. Although their little stems stood so closely pressed together as scarcely to admit a hand between them, yet the fans of single palms rose here and there out of the compact labyrinth, bending in graceful arches. Amidst these sheaves, whose tops sometimes touched and formed a kind of arbour, were seen by turns the smooth surface of the Laguna and the picturesque Corcovado rising above it. Thus then for the first time I saw the bamboo—without recognizing it: let every one who wishes to travel, study botany!

From the Lagoa de Rodrigo de Freitas I rode, turning to the right, through a lovely valley ascending up to the wooded heights, a high rock skirting the road for some distance. I passed some farm-houses lying scattered in the thicket, and detached clay cottages, similar to those I had seen this morning: they are here called "Cazas

de pao a pique." The wooden framework in the clay walls is formed of small beams, about a foot square. Wooded hills rise at the side, and close to the road are fewer tall trees and more copse; the trees I had seen in the morning with the periwinkle-like blossoms occurred again frequently, but in the form of tall shrubs. Passing two lonely houses I reached the top of the ridge, and looked down on the other side upon the sea and the hills which extend to the small plain on the sandy shore. I afterwards heard that this point is named Boa Vista.

I descended and crossed the plain. Thick bushes interspersed with trees lined the roadside, with here and there a house surrounded by coffee-plantations. At the aqueduct this morning I had first tasted red coffee-berries. In the distance before me the mountain, descending steeply toward the sea, approached the coast, whilst on the left was distinctly heard the sound of the waves upon the shore. I stopped at a cottage and inquired whither the road led. "To Dom Luiz Francez," was the reply, my informant pointing to a house or farm upon a rounded height, in the middle of the wood, a kind of terrace on the mountains rising above the sea. I soon reached the foot of this hill, and ascended its steep side. The house before me, surmounting some shelves of rock overgrown with *Agave Americana*, which disappeared below in a small group of bananas,—the tall leafy trees and splendid palms on the acclivity, and far beneath the green expanse of sea, into which projected a tongue of land, with some small islets in the distance,—all com-

bined to form a charming picture, which was nevertheless far surpassed by the scene that lay before me when, on passing the farm and following the bend of the hill to the right, the path emerged from a small banana-grove interspersed with rocks. A second farm, surrounded with luxuriant vegetation, crowned the hill, which covered with noble woods just such as I had pictured to myself the primæval forests descended steeply on the left before me, projecting into the sea with a kind of headland,—a picturesque palm-hill, beyond which was seen another similar one in the distance.

I rode up to the neat little cottage, at the door of which a lady was sitting: a black cloud hung over it, coming from the hills at the back. The lady in vain tried to understand the questions which I put to her in broken Portuguese. At last a little negress made out what I said, and told me in reply that I was at the residence of Dom Luiz Francez, whereupon recovering breath I continued the conversation in French. The fair dame answered my questions with great fluency in a long and well-turned speech, the purport of which was in brief, that this house was situated close under the gigantic wall of the Gavia, which was concealed from view by the dark clouds. It was clear therefore that I was on the way to the "Lagoa da Tijuca," and standing under the head of the "Giant." Resisting with difficulty the alluring charms of this beautiful and wild scenery, I now turned round and took the road homeward, having received a gracious invitation from the

Emperor to attend the French theatre this evening at half-past six o'clock.

The clouds gradually lowered, and the rain soon fell in torrents; it may be imagined that my linen sailor's jacket could not long resist such drenching wet. A beautiful bird of a light-blue colour flew over my head, apparently too large for a Colibri. On the road I met a person wrapped in a dark Macintosh cloak, mounted on a mule, and presently after a number of negroes driving strings of mules, or carrying small burdens on their head. The red clay soil was slippery from the rain, and I therefore led my horse over the hill, amusing myself with watching the negroes as they passed me on the road, and observing their imperturbable good-humour.

What a curious race are these negroes! when walking alone, they talk to themselves, or laugh aloud, whistle or sing. Singing seems to be their great pleasure, but without melody. The Black (in Portuguese "o Preto") is always cheerful, and his tongue is incessantly in motion. His soliloquy generally relates to his master and himself, and he often invents a lively conversation, in which the master is introduced as a speaker, scolding his slave, whilst the latter defends himself. When two negroes meet, the conversation or a silly laugh begins at a hundred paces' distance. A black seldom passes another without speaking, and they always rack their brains to talk in Portuguese; this habit indeed is carried so far, that not even in their soliloquies do they speak their native tongue. The slaves are forbidden by their

masters to talk to one another anything but Portuguese, partly that they may the sooner learn the language of the country, but partly also to prevent their holding any secret intercourse in their presence. The figures of the negroes are often handsome, and in general strongly built; their faces, on the contrary, are almost always ugly, especially those of the women.

I returned to the Mangueira shortly before dark, and drove at once to the theatre. The Emperor and the Princesses took their places, as before, in the box behind the green curtain. When the curtain was undrawn the overture began, and the Court were not seated until the conclusion of the first part. The performances were "Le Chevalier du Guet" and "Lousiette": the actors did not appear to be at all remarkable, and the decorations were in the highest degree amusing, the scenes being laid in the Boulevards at Paris, under the shade of the most splendid palm-trees and bananas, so that the inhabitants of Rio must have carried away a very correct notion of the French metropolis! The Theatro de S. Januario is smaller than the Portuguese theatre, which I had before visited; this evening the festival of the 7th of September was celebrated, and the boxes were hung with drapery of different colours; the house was also brilliantly lighted with wax-candles in bell-glasses.

September 14th.—Another rainy day; but we had not yet witnessed the real heavy tropical rain. This morning, while standing at the window with Count Bismark, I saw the first Colibris, flying about under the roof, and

humming like wasps. To my great regret the projected party to the Tijuca, to which the Emperor had invited me for this day, came to nothing. All that I heard had led me to form great expectations of the excursion: the Princesses and the whole Court were to go on horseback; we were to appear in three-cornered uniform hats and dress-coats, and I was also to be decorated with my new Order, and in this costume to enter the solemn precincts of the primæval forests for the first time! The rain had cooled the air pleasantly: only the first few days I spent in Rio had been really hot, but even then the air was not so oppressive as in Malta, Gibraltar, Seville, and above all as in the vicinity of the coast of Africa.

September 15*th*.—This evening I was tempted to go abroad, in spite of the bad weather. As soon as a stranger sets foot over the threshold, objects of attraction appear on every side: all is new to him, he becomes quite like a child, and wants to see everything *at once*: with eager curiosity he penetrates into the thicket, where a net of lianas envelopes him, like a fly in a spider's web. These he has to tread down underfoot, for it is impossible to clear a way with his hands; he grasps at once ten or twelve of these little stalks, the thickness of a finger, and slender creepers like iron-wire, of all possible forms, colours and species, but with all his strength it is impossible to break them.

This morning, for the first time during several days, I ascended the hill behind the Mangueira, and penetrated

resolutely into the thicket, turning, twisting and stooping as well as I could, and at last creeping on all fours, scratched and lacerated by the thorns. There was life and movement all around; ants and every species of disagreeable creeping things seemed here indigenous, and innumerable cicadas chirped on every side. I saw nothing more,—even the tall Tillandsias, which looked down like giants from the short, withered stumps, as if enticing me into this tangled wilderness, were now indifferent to me; I had one thought alone, how to get out again. In vain I looked around—there was no path, no outlet, but on every side a thick wall of lianas; I could not see twenty steps before me. All at once a thought struck me,—I worked my way up on to the tops of the bushes; some gave way under me, but at last perseverance triumphed; I saw the sky overhead, and around me a sea of tops of the thickest bushes, while, before and behind, this dense labyrinth of foliage descended to the bay of Botafogo. I was not far from the declivity. To prevent my sinking I lay down flat, stretching out my arms and legs, as if in the act of swimming, and thus distributing the weight of my body over a larger surface of bushes. This plan succeeded; but a mere recumbent position would not help me much,—to reach Botafogo, I must move onwards; this I attempted in a swimming fashion, and with admirable success! Occasionally I fell rather roughly among the bushes, thorns, and stones, and had to work my way up again to the top, when lying down I continued my descent, until at length I reached the foot of the declivity and felt the

ground once more under my feet: after about half an hour's hard work, I arrived safe and sound at the gardens of Botafogo, arranged my dress as well as I could, and then set out homeward in high spirits.

This evening I took my way up the hill, which rises above the banana valley on the north, and which I had constantly in sight from my sleeping-room. At first I followed a slippery footpath, and had afterwards to make my way as well as I could, climbing from one side to another. It rained: numbers of birds were flying about in the wet thicket, and shrill notes, such as I never before heard, resounded on every side. A complete botanic garden surrounded me, with an infinite variety of plants and shrubs, of which we in our northern climes can form no conception: it seemed just as if some scientific professor had for years laboured to discover all the various species of plants and to collect them into one spot, in order to present the vegetation of the tropics to the eyes of his audience, for not two shrubs or trees were alike. Upon one prostrate trunk adhered a number of large snails, full half a foot in diameter. When I at length reached the crest of the hill, the view well rewarded the toil of the ascent. In the open spaces between enormous palm-fans I saw, on one side, the entrance of the bay of Rio and the small bay of Botafogo,—on the other, deep below me, Rio de Janeiro, with its suburbs stretching into the valleys at my feet, and the rest of the bay with the Ilha do Governadõr and the men-of-war in the roadstead.

September 16th.—It was a clear and splendid morn-

ing, and we rode to the city as early as eight o'clock. From our tall "Minas-boots" it might be seen, and truly, that we had today no trifling excursion in view; a ride of eleven leagues to Santa Cruz was projected, to visit an estate or fazenda belonging to the Emperor, west of the metropolis.

We passed the Gloria, cast a glance on the roadstead with its shipping, then proceeded under Santa Thereza, through the lofty arches of the aqueduct, and so completely round Rio de Janeiro. What a glorious ride! The most luxuriant vegetation, splendid palms, dark mangos, and bananas of the freshest green, grow close up to the houses. We traversed the suburbs of Matacavallos, Catumby and Mataporcos, charmingly situated at the foot of wooded hills, and partly in the small side valleys and ravines of the mountains, and, after stopping at some picturesque fountains to water the horses, again proceeded.

As soon as the city is passed, the view extends over a wide plain, on the edge of which stands Rio,—a plain encompassed on the south and west by the mountain-chain reaching from the Corcovado up to the graceful horns of the Tijuca, and expanding toward the Bay of Rio on the east and north. In clear weather, as today, the blue misty Orgãos mountains are seen in their full extent in the north and north-east, over the furthest corner of this lake-like bay. In the wide plain rise single, green, wooded hills, and among others the hill already mentioned in the vicinity of the city, which stretches out to the bay, and descends to the road of S.

Christovão in a large, oblique shelf of granite, traversed with veins of white quartz. At the foot of the picturesque mountain-chain, forming the noblest outlines, rises the dark-brown rocky cone of Engenho Velho, completely isolated and visible on all sides. From the city up to the rock of Engenho Velho and S. Christovão, gently rising above the misty plain, villas and country-seats are everywhere scattered among lovely gardens, rich meadows and tall picturesque groups of bananas. Indeed the whole plain forms a single tropical garden, intersected by the broad paved road which connects the imperial palace with the city: this road however leads still further—at least its continuation (for the proper artificial road soon ceases) extends to the gold-works and diamond-washings of Minas, and through Santa Cruz to the Campos of S. Paulo, so rich in herds.

We rode past the palace of S. Christovão, and through the little place of the same name. Here we met the first travellers from the interior, who, like ourselves, wore "Minas-boots"—a fashion in riding which is very common in this country. These boots are made of brown, unblacked viado leather, and are drawn half way up the thigh, like the boots which play such an important part in the costume of Wallenstein on our stage; they also turn down at pleasure, somewhat like the Turkish cloth boots, or are plaited in folds, like the boots of Cortez in the opera, from which they may probably be derived, as well as the heavy military spurs which the Brazilian wears, and the massy old-Spanish bridle.

At the last houses of the village were hung out blue ponchos, with a scarlet lining, similar to those which some of our party had purchased. The poncho is the chief article of dress of the "Mineiro,"—a simple cloak, consisting of a large, square piece of cloth, with a round hole in the centre for the head to go through. The Brazilian is very skilful in putting on the poncho; he throws it picturesquely over one shoulder, or folds it over his breast so that the arms (for there are no sleeves) remain uncovered, and the red lining appears outside, which has a very pretty and peculiar look. This cloak is light, offers a good protection against the rain, and for this reason is very suitable for such a climate; it is easily packed and carried about, can serve for a bag to contain clothes and other things, and frequently during our travels furnished a warm blanket and a soft pillow. The handsomest and richest ponchos are to be had in Buenos Ayres. Outside the city all classes here wear jackets, chiefly of linen, but also cloth; a straw-hat is the common covering for the head, and the Chili hat of palm straw is the most valued. The Arrieiros frequently wear a grey, broad-brimmed hat, with a low, somewhat pointed crown; they likewise occasionally wear the "lasso," or long leather thong used in catching horses and oxen, as a girdle round the waist. A traveller is seldom without a shelter from sun and rain, "a sun-umbrella" in the true sense of the word; this is an essential part of his equipment.

After we had crossed the bushy heights behind S. Christovão, the Tijuca lay close to us on the left: its

form had gained in grace and variety of outline, the two horns ("os dous Irmãos") rose higher, and the space between them was more depressed. True primæval forests cover this mountain, the high stems forming so many articulations in its noble outline. Before us on the right, the blue range of the Orgãos mountains was distinctly seen,—today for the first time perfectly clear and cloudless. The rock formation on the eastern declivity of the Serra dos Orgãos, which gives it this name, is remarkably fantastic, resembling a row of organ-pipes of different lengths. With the exception of this declivity, the contour of the mountain forms a long, gently rounded line.

At the bridge of Praya Pequéna we saw some decked boats, schooner-rigged, lying in the narrow stream of Maracaná, which empties into the bay or inlet called the Bahia de Inhaúme near this spot. The road now traversed a hilly plain for some distance, turning off behind Venda Grande to the right over Nossa Senhora de Irajá in the direction of Minas. We continued straight on. The vegetation was rich and varied; on the heights before us a row of palms rose high above the underwood, and single houses, or rather farms, were seen on the slopes of the hills by the roadside, affording very picturesque views, especially on the side of the Tijuca.

These estates are not important enough to be called fazendas, small mandioca or sugar and coffee plantings only being occasionally seen in their vicinity, whereas large plantations are inseparable from the idea of the

fazenda. For small farms, like these in the country behind S. Christovão, the proper term is "Sitio," whilst country-houses such as those in the vicinity of the city are designated by the word "Chácara."

Behind the village of Pedregulho a tall copse-wood skirts the road, intermingled with single trees. It is difficult, as I have said, to form a conception of the impervious closeness of such a thicket, interlaced with thousands of lianas. To the trunks of the trees adhere large Orchideæ and Tillandsias as tall as a man, while all kinds of long-haired mosses float like transparent, round birds' nests high upon the tops of some dead bush, or hang down like horsetails or wigs from the branches. Here and there are seen high up in the trees single red, lilac, or yellow blossoms, and wild pine-apples with a red fruit full of seed grow by the roadside. There were also numerous slender palms in the thicket, and groups of that small palm, or large palm-like reed, with rows of prickles encircling the stem-like black rings; also enormous palm-branches, with such short stems that they appear to spring out of the earth or thicket. In many places large leafy trees—their wide-spreading branches overgrown with Orchideæ—had quite the appearance of enormous candelabra. The great variety of creepers, and the graceful forms which they give to the bushes, are extremely attractive. The black, parrot-like Anú, the small, yellow Bemtevi (which is continually repeating its own name Bem-te-vi, i. e. "I saw you") and a species of brown bird with yellow wings, enlivened the thicket, together with quantities of beautiful butterflies, among

which I again particularly noticed those of an iridescent blue colour. With the twittering of the birds was mingled the chirping of the cicadas.

A broad road is cut through the thicket, well-adapted for riding on horseback, and which was formerly used occasionally by the Emperor and the Princesses as a carriage-drive. From time to time we passed houses by the roadside, generally surrounded by a small garden, but seldom with any regular plantation, and occasionally came to a spot where the thicket had been recently burnt. When a piece of land has to be brought into cultivation, the first thing is to cut down the forest-trees and burn their stumps; the earth is then brought under tillage, in a shorter or longer time according to the seed that is sown. It is afterwards generally left for awhile fallow, in order not to exhaust it, and during this time of rest a young copsewood springs up,—the "Capueira," or young forest, as contrasted with the virgin forest, the "Mato virgem." The same process is afterwards repeated, and thus all around Rio is seen this kind of underwood, which has been burnt down once or oftener. Only the forests of the Tijuca and a part of those of the Corcovado have escaped the fire, and retain their original character. The Government watches over their preservation, because these high-stemmed impenetrable forests draw down the clouds upon the mountain-tops, where arise the springs that supply Rio with water for drink, and likewise because they shade the Aqueduct along the greater part of its course with a cooling roof of foliage.

The road led gradually to a wide, open plain, skirted on the left hand by high wooded hills, extending from the Tijuca to the Serra Barata, which soon came in sight. In front on the right rose the long ridge of the Serra do Campo Grande, which is connected on the west with the Serra dos Orgãos. Along the whole road from S. Christovão we had passed numerous strings of mules, driven by negroes, — the "Tropas" which bring the merchandize from the interior of Brazil to the coast. We also met travellers, as might be expected on a road where every house is at the same time an inn or *venda*. The sun's heat had gradually increased, and Mr. Theremin was just remarking that it was weather to bring out the serpents—a burning sun succeeding several days of rain—when we perceived a slender, grass-green serpent almost three feet long, of a perfectly harmless species, sunning itself in the middle of the road; as soon as the creature perceived us it glided away with the swiftness of an arrow. Before arriving at the village of Campinho, nearly four leagues distant from the city, the road runs under a rocky hill, which, shaded by beautiful groups of palms, forms perhaps the most picturesque spot between Rio and Santa Cruz.

At twelve o'clock, under a burning sun, we arrived at Campo Grande, a large village about half-way to Santa Cruz, where we turned in at the venda of "As Creolas or Brizida," five leagues and a half from Rio. It had an open verandah, like all the houses on this road, and only a single story. We were shown into an apart-

ment, in which stood some slender bedsteads, with straw mats, *esteiras*, and upon them mattresses and pillows. Although these comforts are not found in every Brazilian venda, yet the bedsteads and esteira are scarcely ever missing. The dinner was very good, with no lack even of bread, which is seldom met with at a few leagues distance from Rio, the mandioca-flour, farinha, being eaten with everything instead: I tried this today for the first time, but could hardly get it down; on the contrary, the dried "goyabada" tasted excellent.

The situation of Campo Grande, on a broad plain between the Serra of the same name and that of Barata, is very pleasing; but at a short distance behind this place the country is still far prettier, three high, wooded hills advancing in front of the Serra do Campo Grande, but without concealing it. The road now again led through tall underwood, intermixed with beautiful trees: on the left lay the mansion and estate of Lieutenant-Colonel Bangu, where the Emperor usually sleeps. Large pools of rain-water had formed in the road, and the brooks which crossed it were swollen. In passing one of these streams, we met an elegant, fair-featured lady on horseback, with a groom behind her. To the right and left paths led into the thicket, and it was evident that all this land belonged to some large estate. Presently after we saw another considerable fazenda, with extensive sugar- and coffee-plantations, and meadows, upon which herds of cattle were grazing: the name of this place was "Casa Viega."

At Santissimo, an insignificant village consisting of a few houses, among which the church stood prominent upon a small hill, the view extends more widely over the valley. The splendid *Agave Americana*, with its straight, narrow gladiate leaves, forms bushes by the roadside, so high that a man on horseback can conceal himself behind them. Near the church is a small fort for two guns, which serve to announce the arrival of the Emperor, when he travels to Santa Cruz; a flagstaff stands by the side.

On approaching the little village of S. Antonio, whose church likewise crowns a rising ground, the country appeared to me prettier than any we had passed through. Here we came to the first rancho, a large shed for the accommodation of the Tropas: under it were a number of saddles, and the mules, fastened up to posts, bivouacked on the wide road. We saw something similar, but on a larger scale, soon afterwards at Curral Falso, where the steward received me at the entrance-gate of the imperial domain, the Fazenda de Santa Cruz. He conducted me in the twilight through a beautiful avenue half a mile long, and over several bridges, to the palace, the approach to which is a very wide road lined with single-storied houses, and joining the end of the avenue.

This is the negro-village, in which live the greater part of the 1700 imperial slaves who belong to this estate. All the young blacks were on their legs. I was conducted through the spacious rooms of this (for Brazil) grand palace, to the apartments prepared for me, where

an excellent dinner awaited us. This castle was built by the Jesuits, who retained possession of it, together with the extensive lands attached, until their expulsion from the country, when it was seized by the Crown. Before retiring to rest, I cast a glance out of my window upon the meadows: the night was not dark. It gives a strange feeling to gaze thus on the limit of civilization,—of the immense uncultivated continent of South America; a journey of a few days, nay even of a few miles, into the interior, and how changed must be the aspect of life and nature, how different to the scene which here surrounded me,—here, on the threshold of an interminable wilderness!

September 17th.—On going to the window this morning, I saw beyond the meadows the Serra de Itaguahy appearing partially above the grey mist and the high woods in front. In the immediate vicinity of the castle I observed a small cotton-plantation,—the first I had seen. Beside the white flocks of cotton, hanging like ripe fruit upon the branches, the shrubs bore beautiful yellow blossoms, which gave them a pleasing appearance.

We had hoped today to have good sport in shooting birds, and had been also promised a shot at some Jacarés (alligators); our little party therefore started early in the morning, and crossed the meadows to the capueira. At the first shot I had the good luck to bring down an Anú, a black parrot-like bird: they are here very plentiful, and do not appear shy. We then passed over a canal

or side branch of the Taguahy by a stone bridge, not far from a large imperial tilekiln.

The neighbouring wood was soon reached. Here we dismounted, being told that we could only proceed on foot to the "Lagoa," the lake or pond, which the alligators were said to frequent. A number of negroes armed with large knives (*facõez*) went on before, to cut a path through the forest. Tall, slender trunks, with colossal Orchideæ attached to their branches, venerable trees, laced and entwined with a thick net of creepers, splendid groups of Heliconias, "Bananas bravas" (wild bananas) with their densely compressed masses of foliage and gracefully bending heads, and lastly actual colonnades of large palm-fans, under the shade of which the path continued for some distance,—let the reader imagine all these scenes and objects, enlivened moreover by innumerable, various-coloured birds, and he will still have but a faint picture of the forest through which we wandered.

After a few minutes the blacks who preceded us stopped short; we had come to a deep pond, about twenty yards across, shaded by palms and other trees, long creepers hanging down to the surface of the water. This was the spot of which we had heard so much, and *this*—the famous lake! we saw ourselves bitterly deceived, for what hope was there of here meeting with any game worth powder and shot? The negroes were sent into the water, and partly swimming, partly wading, they drew the pond with a net, but found no Jacarés. What giants of

the deep these alligators must be, the reader may easily imagine. The whole affair with the negroes pleased me little, and the end of it was that the alligator chase was given up without a single Jacaré being caught, and we took the field against other more innocent creatures, especially variegated birds: a chase followed, without plan or order, the field of our operations lying partly in the forest, partly in the capueira, and on the meadows, where at a distance stood the castle of Santa Cruz upon a gently rising ground. My passion for the sport increased every instant, and, beside the pleasure of a successful shot, I was interested in obtaining a near inspection of those beautiful birds which had attracted my notice at a distance. Eleven birds—an Anú, two Bemtevis, a Tié, a Sabiá, a Picapao, three Piasoccas, a Peruinho do Campo and a Gavião—were brought down by my gun. The most beautiful of the birds we shot was a Tié-fogo, a male Tié: its breast is of a splendid red colour. I took aim at several, but could not succeed in shooting any.

After dinner we went into the castle-garden, and wandered through the wonderful dark arbour, 1185 feet long, of bamboo-canes, more than thirty feet tall and one to one and a half inches thick; at the termination of this we again came to a large tract of meadows, adjoining the garden, in which lies the "Coral," a spacious enclosure set apart for the reception of wild horses. A great number of these animals had here been driven together, to give us an opportunity of seeing the Emperor's negro-slaves fling the lasso and the "bolas." The lasso is a

very long plaited leather thong, with an iron ring fastened to its end; through this ring is drawn the other end, so as to form a running noose. The negro, holding the end of the lasso in his left hand, swings the noose high above his head with his right, and then throws it so skilfully as to drop it round the neck or leg of the horse which he wishes to catch. He then draws up the noose, holding fast with both hands to the end of the lasso, and letting himself be dragged along. The strength which he exerts in this manner is so great, that the horse, after dragging him a few yards, is generally knocked up. Frequently several negroes throw two or three lassos at once round the neck or legs of a wild horse, and in this manner pull him to the ground; whereupon a number of other negroes immediately run up, to hold the horse by the lassos, while the animal makes all imaginable efforts to get free, leaping, rearing, and plunging in an unheard-of manner. Sometimes it is necessary to bring the horse down again by means of the lassos, and lay him on his side, in order to bind him faster and impede his freedom of motion; when this is done they let the horse jump up again and saddle him.

The bow of the *lumbilho*, or saddle, is like that of the German saddle; the leather girths on the contrary are similar to the rope girths of the Hungarian saddle-bow. Over the saddle is thrown a skin covering, and upon this a small sheepskin, to give the negro a firm seat. A halter is then put upon the horse, as he stands stamping and foaming with impatience; his tongue is tied fast to

the under-jaw with a thin string, and to this is fastened another thicker cord of hemp or horsehair for a bridle. The "Peão," the black horse-breaker, now comes up, distinguished by long military spurs on his naked heels, which give his whole figure a comical air. When he mounts, another negro keeps the horse's eyes closed with a thick bridle; the rider flings himself into the saddle, and twists the long end of the halter, which also works upon the lower jaw, several times round his body. The lassos are then loosened, and instantly the horse begins to plunge and rear. No one can form an idea of such plunging. The task of the rider is now to bring the horse into paces, which, if the black succeeds, that is to say if he is not flung off (which happened repeatedly today), generally ends in the animal's running away, until after five or ten minutes he stops again of himself. With the halter twisted round his body, the horse is now unmercifully screwed up and contorted in his limbs, until, with his head forced on one side, he yields. The method generally adopted when a horse is captured, is to tire him out in this manner and with incessant riding, until from sheer exhaustion he can go no further, and submits to his fate.

We witnessed another method of capturing wild horses: a feeble old negro, in a green coat, flung the "bolas" in the manner practised at Buenos Ayres, but only once successfully, failing at least ten times; this was however from no want of will, for he exerted himself bravely, but strength and luck seemed, at least for today, to have left him. The bolas consist of a cord, to the

end of which is fastened a little ball, the other end being parted like a fork into two short cords, of equal length, to which are fastened two heavier balls. These balls are thrown between the horse's legs, in such a manner as to wind round them; the horse is thus stopped in his course and falls. This race of animals is neither particularly strong nor handsome, and mostly of a small make.

This evening, before dark, I had again the pleasure of shooting off the orange-trees five green honey-suckers, a large species of Colibri, with a true metallic lustre. On my return to the castle, the gamekeepers brought in two living Jacarés, one about four feet, and the other which was younger about one foot long; they had been taken in the little river of Taguahy. The difference between these Jacarés and the proper alligators is said to consist in the teeth, not in their size; we were told for instance that on one occasion an alligator was caught from seven to eight feet long, for the consort of Dom Pedro the First, the present dowager Duchess of Braganza.

September 18*th*.—Early this morning, on emerging from the long avenue, the Serra de Itaguahy lay before us perfectly cloudless. On our ride back we met at S. Antonio the Justice of the Peace in his carriage, with the yellow and green band over his shoulder. The electors were riding up to the church, where an election of Deputies was to take place; and among the rest a gentleman clad as a civilian, with a star on his breast, was riding up the hill at the head of a number of horsemen in dress-coats and jackets. I made several sketches

on the road. The day was very fine, and not too warm: we again dined at Campo Grande. In the neighbourhood of S. Christovão several German families have settled. The Tijuca was suffused with the rosy light of the evening sun, when from behind the castle we saw the Emperor approaching with his escort. Swarms of Sunday horsemen had been enticed out by the beautiful weather this afternoon. The moon was already mirrored in the waters of the bay, and imparted an air of enchantment to the Gloria and the shores of the Bay, when we reached the Mangueira.

September 19th.—Dona Januaria's nameday was celebrated by a Court dinner and a large ball in the palace at Rio. At one end of the ballroom was a raised floor, upon which the Emperor and the Imperial Family took their places. I was invited in turn by each of the Princesses, in a very courteous manner, through Senhor Paulo Barboza, to dance a quadrille, and afterwards to waltz. I waltzed! No one can imagine the import of that word but one who, like myself, possesses not a particle of natural *tact* for this dance,—borrowed surely from the course of the planets,—and who either hears the hurried time of the music flying before him like a phantom, or panting after him as he vainly tries to escape. In fact the pivot-like repose of the gyrating bodies is absolutely requisite in order to stand up in the struggle against time, music, giddiness and corners, and the slippery smoothness of the floor, and to accomplish these circumvolutions with true planetary accuracy and regularity. But practice makes perfect; by degrees I fell into the

measure, and had I continued to waltz for another hour, who knows what a dancer I might have become!

The heat might be called tropical in the true sense of the word, and the Emperor occasionally left the ball-room to enjoy the fresh air in an antechamber. I could then step down from the platform for an instant, and converse with the persons standing around. At midnight we all repaired to the supper, at which chamberlains served the Emperor and the Princesses. Etiquette is observed with extreme strictness at the Court of Rio de Janeiro, and isolates the Royal Family perhaps still more than in other countries; I was told for instance that, until the visit of the Prince de Joinville, the Princesses could only dance—waltz at least—with foreign princes or with ladies; since that time the ice is broken, inasmuch as they are generally allowed, during the visit of a foreign prince at the Brazilian court, to dance with gentlemen. Except at these times however the Princesses waltz only with the ladies of the court.

September 21st.—Our excursion to the Orgãos, which had been fixed for the 21st, was yesterday postponed, as no steamer went to Magé. I have subsequently heard such interesting accounts of these mountains, their peculiar and wonderful rock-formation, and the charming estate of Mr. March, who lives high up amid the forests and is said to be remarkably hospitable to strangers, that I greatly regret having relinquished this celebrated excursion. I advise all who visit Rio to see the Orgãos, were it but that in Europe every one who has been at Rio inquires about these mountains: so it is all the

world over—there are certain points which a man who has travelled *must* have visited.

Instead of making this excursion, we agreed to devote a few more days to our projected trip to Cantagallo. In order not to lose the fine weather this morning, we took a ride to the Corcovado. The way leads through the charming valley of Laranjeiras, which has already been described. At the end of the village we rode up a steep path into the thick capueira and among wild coffee-plants, until we gradually came into the shade of the forest, where the eye ranges in astonishment from one trunk to another. The horses are generally left at a farmhouse, about half an hour's ride from the summit of the mountain. Up to this point the path is so admirably kept, the bridges all new and substantial, that a person might fancy himself in the most splendid park. The path now became steeper: on several high trees I noticed a kind of short, thin props growing out of the trunks, like narrow planks set on edge. There are a great variety of palms likewise on this road, and higher up we gathered some handsome flowers which were new to us. But above all our attention was caught by a beautiful serpent, lying by the wayside,—not large, but of the most splendid scarlet colour with black rings.

The summit of the Corcovado consists of two rocks, parted by a narrow ravine. Formerly there was a bridge from the platform of the first rock over to the higher detached rock which rises perpendicularly above the valley. This bridge is now destroyed, so that it is almost

impossible to reach the proper summit of the mountain; the view from the platform however is wonderfully fine, the opposite peak concealing very little of the landscape. The eye wanders down to the valley of Laranjeiras, then to Rio and the whole extent of the Bay. Unfortunately the Serra dos Orgãos was today hidden from sight by the mist, which in clear weather forms on this side the vapoury background of the picture. On the other side of the peak which intersects the panorama, you look down upon the Lagoa de Rodrigo de Freitas, and the fertile plain which separates it from the bay of Botafogo; next is seen the Sugarloaf, and on the further side, as if depicted upon a map, the entrance of the Bay, Santa Cruz, and the islands, floating as it were in the mist. On turning round, the spectator surveys the wooded range of mountains, topped by the Gavia and Tijuca, which exhibit the true character of virgin forest.

On a second ride to the Corcovado, which I subsequently took alone on the 23rd of October, I had the good fortune to see the range of the Orgãos perfectly clear. At the very commencement of the ascent they have a most picturesque aspect, lying at a distance in a line with the road, enclosed in a pleasing frame of tall, graceful palm-fans and luxuriant bushes; whilst in the foreground I saw deep below at my feet the mirror-like surface of the Bay with its numerous islands, and the city of Rio. On this second excursion to the mountains I discovered a new and charming road, turning off along the Aqueduct at the farmhouse where the horses are left,

with the Botanic Garden lying deep below. My desire to sketch the fine trees in the forests induced me to make this excursion; but after the primæval forests which I had seen in my journey to the Parahyba, I could not find any tree that seemed worth sketching. It was however a different thing today, when I entered for the first time these forests of the Corcovado, which fill the traveller just arrived from Europe with astonishment, and leaves nothing for his imagination to desire.

We returned to luncheon at twelve o'clock, and at half-past one were on our way to the fort of Santa Cruz in the third cutter of the 'San Michele.' The fortress is situated upon a flat tongue of land on the eastern side of the entrance to the Bay, and separated by a cleft in the rock from a steep hill or ridge between two cones, on the summit of which stands the old Forte do Pico. In time of war this fort is capable of being restored without much trouble,—an important circumstance, as it would otherwise be open to attack and might easily be taken from these heights at the back. Santa Cruz, according to the statement of the Commandant and the artillery-officer of the place, has from 111 to 130 cannon, but their heavy carriages are perhaps not in a completely serviceable state for war; the accounts I received of the garrison ranged between 800 and 1200 men. There are as yet no mortars, which might be here of great service. The side facing the entrance of the Bay, opposite the Sugarloaf, has three stories, or more correctly platforms, one over another, for guns; the sides facing the sea and the Bay have

each two stories. The lines toward the sea are so skilfully broken as to maintain an excellent raking-fire against any ships that approach. The stone breastworks on the contrary, over which the guns fire, appear so low and weak, that a few broadsides from a ship of the line sailing past might easily sweep off the men serving the guns or drive them from their post.

The fort of Santa Cruz on the east side, Lagem in the middle, and S. Theodosio and S. João on the west side of the entrance, thus command a cross fire and form a semicircle, through which any enemy's ship intending to force an entrance into the Bay of Rio is obliged to pass. Supposing all these works to be strongly fortified, mounted with a full complement of heavy guns, and the artillerymen protected as much as possible against the enemy's fire,—they would, even if unable wholly to prevent the entrance of an enemy's fleet, at least damage the ships so materially that it would require some time to refit them for service. In the same manner as the south front of Santa Cruz, Fort Lagem in a second and Fort Villegagnon in a third line are so advantageously situated for a raking-fire, that a large walled work of at least two stories, perhaps a strong tower, would be very serviceable, which mounted with mortars could annoy the enemy's ships at a distance and hinder their approach.

Supposing the enemy's fleet to have forced the entrance, it would encounter the forts of Gravatà or S. Domingos and Boa Viagem, situated upon two points on the east coast, which, if their fortifications were restored,

would form in conjunction with Villegagnon a second chief line in the defences, the efficiency of which might be considerably increased by some men-of-war anchored with a spring between these islands and the forts. The east side of the city, with its adjacent suburbs, is protected against a landing by the above-mentioned insular fortress advanced far in front of it, and by the Ilha das Cobras projecting like an immense *caponnière*, whose present state of defence I do not exactly know; it is also in some measure defended from the approach of large ships by banks and reefs,—at least, according to the charts of the Bay, from their anchoring within about $3\frac{3}{4}$ to $7\frac{1}{2}$ cables-length, or 950 to 1900 paces from the Ponta do Calabouço. The north side of Rio, on the other hand, is quite exposed to any hostile attack by sea. On the land side also the metropolis may be considered unprotected; for the Morro do Castello, which stands like a bulwark at the Ponta do Calabouço, can hardly be regarded as a fortification; and a hostile landing therefore on the west side of the entrance of the Bay might easily prove dangerous. To protect Rio at least on the south against a *coup-de-main*—which would be practicable along the Bay through Botafogo—the forts da Praya Vermelha and do Leme have been erected south of the Sugarloaf. Opposite to them we find at Praya da Fora also an *emplacement* for a strand-battery, the chief object of which might be to oppose any landing directed against the Forte do Pico*.

* Amongst the above-mentioned forts the following have Commanders of note, and appear therefore to be kept up in a state of

Our swift-oared cutter carried us from Santa Cruz to the Naval Arsenal, situated on the north side of Rio de Janeiro under the heights of S. Bento,—a glorious passage in brilliant weather.

There seemed to be little life in the spacious arsenal, which contained no "Dry Docks," nor any roofing for the ships in the course of construction; a single steamer only, of small size, was on the stocks. The 'Euterpe' corvette, of twenty guns, was just arming. The cabins of the officers appeared to me too high, and those for the crew on the contrary to have comparatively insufficient comfort; she had moreover a round stern, with only one porthole. The 'Dom Pedro II.' of seventy-four guns, on board which is the naval school, the frigates 'Principe Imperial' and 'Constituição' of sixty guns, a second and third very small corvettes (the last used for experimental trips by the School), and two small steamers, were anchored before the Arsenal, whilst some brigs-of-war lay in the roadstead.

On my way from the 'Euterpe' I visited the 'Constituição,' the interior fitting-up of which was in rapid progress, as this frigate was destined to fetch the Emperor's Bride. She was built in the United States about twenty years ago, and for a sixty-gun ship is extremely small; I heard that she was of only 1200

defence:—Santa Cruz, Ilha das Cobras, Lagem, Villegagnon, S. João, Praya Vermelha, and Boa Viagem. If the reader desires to learn the former state of defence of Rio de Janeiro, he may refer to Duguay Trouin's interesting account, dated December 6th, 1712, in Eugène Sue's Histoire de la Marine Française, vol. 5, pages 306, 307.

tons burden, not much more than half that of the 'San Michele'; she is however very high between decks; on the other hand her quarters are extremely confined; and the chainwales, on account of the guns, divided. She carries throughout twenty-four-pounders. The state cabins for the Empress and her suite were already fitted.

From her geographical and political position, Brazil appears to be destined by nature to be a naval Power. Commerce and navigation constitute the only connection with the transatlantic, civilized world, whilst the fleet offers by its cruisers the means of gaining for the young State consideration and respect among the nations of Europe. If the trade-wind, on the one hand facilitates the communication between Europe and Brazil, and thus narrows in some degree the wide gulf that separates the two countries, it on the other hand considerably lengthens the passage of ships from North to South America. Brazil is therefore perfectly isolated as a naval Power, or at least cut off by a tedious navigation from all the important naval states, in which number we of course include, together with the great Powers of Europe, the United States of America. Now this isolated position is a source of strength to the young Empire, inasmuch as it gives her time to prepare for a defensive war, and in certain circumstances also offers at the commencement of a war an opportunity of developing superior forces against the enemy. Moreover as the course round the Cape of Good Hope to India, and that round Cape Horn to the Pacific—those two great highways of commerce

to all maritime nations—nearly touch the coast of Brazil, the latter Power can with ease, in such a case, cut off the enemy's commerce and whalefishery, by sending swarms of privateers and cruisers, which, without going far from home, might deluge the ocean from the Amazon River to the La Plata, and at the same time convoy Brazilian vessels safely in and out of the harbours of the Empire in spite of all the enemy's force.

If a hostile fleet is actually off the coast, it has an extent of nearly 3600 nautical miles to blockade, and this at a great distance from any means of aid or relief. This last circumstance presents the chief obstacle to steamers, on account of the coal they require; and yet these vessels are peculiarly adapted for such a service, since they alone have the power to coast backward and forward at pleasure, in spite of the equatorial stream and the Brazilian branch of it, as well as the trade-wind. Hence it is that the imperial navy would derive great advantage from having a superiority in steamers. But in a country where a sea-passage offers, if not exactly the shortest, at all events generally the safest, quickest and most convenient channel of communication between the coast provinces and the metropolis, steam-navigation is an essential requisite, especially when, as here, revolts in the provinces and the consequent despatch of troops, are events of not rare occurrence. No country in the world moreover possesses such an extraordinary inland water communication as South America; gigantic rivers traverse its continent like life-arteries, branch out far into the interior, and, whilst they

form the only path that winds through these endless wildernesses, open to steam-navigation a new and fertile field of activity. By this means the imperial banner can penetrate hundreds of miles into the interior, to the furthest settlements, and there unfold to command, to chastise, or to conciliate.

Brazil possesses noble harbours; those of Santa Catharina, Santos, Rio de Janeiro, Bahia and many others, are capable of sheltering the largest fleets. The extensive coast of the empire offers, as we have seen, an immense basis for the operations of her own squadrons, an open field for her cruisers and privateers, which every foreign Power, desiring to conclude an alliance offensive and defensive with the young State, will surely take into account. If strongly fortified, these fine harbours would serve as a bulwark for their own force, and as a safe asylum for the squadrons of allies, which would find here shelter, rest and every requisite to refit and enable them to venture out again upon the treacherous element. In all this nature has done much, but much remains for art still to effect. There is no want of excellent wood for building, although in Brazil, as well as elsewhere, complaints are heard of its deficiency; but how can these complaints be reconciled with the fact, that a sumaca once sailed to Rio from Pará which was hollowed out of a single colossal tree? Another essential requisite, for the economical maintenance of a fleet and the conduct of a naval war, are Dry-Docks for building, which I do not remember to have seen either at Rio, Bahia, or Pará. It has been recently proposed to establish larger iron-foundries, for

the manufacture of boilers and machinery, but coals for this purpose will have to be imported from abroad.

The chief obstacle to the growth of the naval power of Brazil is undoubtedly the circumstance that, although the places along the coast are among the most populous in the country, they do not supply a sufficient number of sailors for the navy and merchant-service, which is the reason that blacks or coloured people, mostly slaves, are almost exclusively seen on board Brazilian ships. The Indians are especially in request, being considered to have a great talent for seamanship, and are said to be drawn from the very heart of the country into the naval service. This has some resemblance to the French and Russian conscription for the fleet, which seems to have confounded the military with the sea service in no very advantageous manner. Although it might be difficult to reconcile this view of recruiting for the fleet with that of other maritime nations, yet Brazil —in her excuse be it said—is so circumstanced as to be obliged to make a virtue of necessity. If the Emperor could, like the United States, command eighty thousand sturdy, northern sailors, and if the finances of the empire were equal to the maintenance of such a force, what a position might he assume in the face of the world!

For a country however so remote as Brazil less is required to place her, for a time at least, among the first naval Powers. The seven Dutch two-deckers, for instance, are not of much account among the naval forces of Europe; nevertheless if we imagine these ships, fully armed and equipped, transported to the Dutch posses-

sions in India, they would form unquestionably the first naval power in those seas, and at the same time would extend a strong arm commandingly over the Pacific; they would exercise an unlimited sway over all those countries—a sway which no naval power in the world (at least for the first half-year) however formidable, could oppose; since at the present time no fleet is in a position to send a squadron into those waters, within that period, able to encounter these two-deckers. Consequently if in Europe only those ships of the line repay their cost which are built in large masses, and kept together in strong squadrons and fleets, yet the Brazilian navy—which might occupy a position in the western portion of the southern hemisphere somewhat similar to that of the Dutch two-deckers in the East—would at least derive advantage, in its isolated position, from possessing *some* such ships, if the great cost of building and manning them did not make it more adviseable to relinquish this, and to apply those two rare requisites in Brazil, money and sailors, to other purposes.

We have already shown the necessity of steamers for the imperial fleet: these would naturally be divided into two chief classes,—those destined for the rivers, lakes, and shallow harbours, and those to be employed upon the ocean. The first of these would have to be restricted to the minimum, but the latter to be fully equipped in point of tonnage, number, horse-power and armament, as far as the resources of the State would permit. In recent times the Ministry of Marine has very decidedly advocated the employment of steamers,

and proposes to have two steam-cruisers built in England, of 250-horse-power and armed with mortars.

The liability of steamers to have their machinery and paddles damaged, as well as the fact of their presenting no powerful broadside—two defects which, it is hoped, the Archimedes-screw may perfectly remove—have rendered these vessels hitherto unadapted either for fighting at close quarters, or for the destruction of artificial defences and the bombardment of fortified places. In the present position of things, a navy therefore like the Brazilian requires some stout sailing ships for the service, not merely to harass but to vanquish the enemy. Next to the two- and three-deckers, the sixty-gun frigate is the ship best fitted for this service, taking the thirty-two-pound calibre as her minimum weight of metal, including a number of mortars, discarding the carronades on the quarter-deck, and lastly rendering her capable of a burden of above 2000 tons. The frigates which Brazil now possesses date, as we have seen, from a period when the requirements were not so great as at present, and when for instance the twenty-four-pound calibre was fully sufficient. It is now proposed to adapt, by boring, not only these twenty-four-pounders, but most of the guns in the fleet, to a greater calibre. With regard to the equipment of the small sailing cruisers, only a few of them are armed in an equal manner to the corresponding vessels in other navies; the same may be said of the gunboats. But another standard must in part be applied to these smaller vessels, as some classes of them may be used rather in the suppression of revolts, in the

police service, and against the natives, than in conflict with regular men-of-war; their chief requisite therefore is to be able to wind their way through shallow waters, whilst the smallest number of guns is sufficient.

To the above observations I will here add the most recent list of the Brazilian Navy, with which I am acquainted, taken from the "Relatorio da Repartição dos Negocios da Marinha" of the year 1845.

ARMED VESSELS.

	Guns.	Cannons.		Carronades.	
Frigate.					
Paraguassu	34	26	18-p^{rs}.	8	24-p^{rs}.
Corvettes.					
Dois de Julho	26	26	12 „	—	— „
Dona Januaria	24	2	18 „	22	32 „
Euterpe	20	2	12 „	18	32 „
Bertioga	16	2	18 „	14	32 „
União	16	2	12 „	14	24 „
Brigs.					
Tres de Maio	14	2	12 „	12	18 „
Capiberibe	12	2	12 „	10	18 „
Imperial Pedro	10	2	12 „	8	18 „
Brasiliero	8	—	— „	8	12 „
Schooner-Brigs.					
Calliope	14	—	— „	14	18 „
Fidelidade	12	—	— „	12	18 „
Guararapes	10	—	— „	10	18 „
Leopoldina	10	—	— „	10	18 „
Nicterohy	10	2	12 „	8	18 „
Olinda	10	2	9 „	8	18 „
Pirajá	10	—	— „	10	12 „
Schooners.					
L'Egalidade	8	—	— „	8	12 „
Primeiro de Abril	5	1	12 „	4	18 „
Riograndense	5	1	12 „	4	9 „

	Guns.	Crews.		Commanders.		
Schooners.						
Panfa	3 ..	2	6-p[rs].	1	18-p[rs].	
Guahiba	3 ..	2	9 „	1	18	„
Jacuhy	3 ..	2	9 „	1	18	„
Rio Pardo	3 ..	2	9 „	1	18	„
Cassapava	1 ..	1	12 „	—	—	„
Gravatahy	1 ..	1	12 „	—	—	„
Pataxos.						
Argos	10 ..	2	6 „	8	18	„
Januaria	8 ..	2	12 „	6	18	„
Desterro	5 ..	1	12 „	4	18	„
Camarão	3 ..	1	12 „	2	12	„
Hyates (*Yachts*).						
Veinte ocho de Julho	3 ..	1	12 „	2	9	„
Cahy	1 ..	—	— „	1	18	„
Capivary	1 ..	—	— „	1	12	„
S. Gonçalo	1 ..	—	— „	1	18	„
Jaguarão	1 ..	—	— „	1	12	„
Ibicuhy	1 ..	—	— „	1	12	„
Parker	1 ..	—	— „	1	12	„
Neptuno	1 ..	1	9 „	—	—	„
Quince de Noviembre	1 ..	—	— „	1	12	„
Caçador	— ..	—	— „	—	—	„
Cutter.						
Guarany	1 ..	1	6 „	—	—	„
Canonières. Nr. 1.	1 ..	—	— „	1	18	„
Steamers.						Horse Power.
Guapiassu	3 ..	—	— „	3	18	„ 70
Thetis	3 ..	—	— „	3	18	„ 70
Urania	3 ..	1	9 „	2	12	„ 45
Amelia	1 ..	1	9 „	—	—	„ 25
Cassiopéa	1 ..	1	9 „	—	—	„ 12
Fluminense	1 ..	1	6 „	—	—	„ 25

Also seven Transport-vessels.

In addition to the above:—

Dismantled:—One ship of the line (Pedro Segundo), two frigates (Principe Imperial and Constituição), one corvette, two schooners, two steamers (one of 120 horse-power), one charrua and one life-boat.

Vessels no longer fit for service:—Two frigates (Imperatriz and Campista), one corvette, two barques, one canonière and one charrua, also two prizes.

The manning of the fleet consists of 234 officers in active service, and 283 third-class officers (those who are withdrawn from active service, without any pension or claim to promotion, but who are employed on various commissions),—consequently in all, 517 officers, whilst the Etat-major strength amounts to 521 officers. The fleet has moreover from three to four thousand sailors, and a corps of marine artillery of 36 officers and 1166 men.

The Admiral, who conducted me round the Naval Arsenal, afterwards took me in his elegant barge, rowed by a crew drest like those of the Dutch boats of this kind, over to the Military Arsenal situated on the Ponta do Calabouço, where the Minister of War, Jozé Clemente Pereira, received me. This establishment has more the appearance of a general depôt than an arsenal, yet appears to be of insufficient extent, as the Emperor has before him a plan for a new and larger one. There are five other Arsenaes de Guerra in the provinces, namely in Mato Grosso, Bahia, Pernambuco, Pará and Rio Grande do Sul. The manufacture of arms is not inferior to that in the great European armies. In the pistols, a connection between the barrel and ramrod attracted my

attention; a hinge of a peculiar kind holds the ramrod fast, but allows it so much play, that the loading is in no degree impeded. This contrivance, which is very useful in quick firing, is also adopted by the North American cavalry; I noticed these pistols the next day on board the American ship of the line 'Delaware,'—intended for boarding.

Before I left the Arsenal, the Minister to my great joy presented to me, by command of the Emperor, a complete collection of the imperial Brazilian weapons. I was especially interested by the peculiar and national equipment of a horseman of Rio Grande do Sul, which formed part of the Emperor's gracious present; amongst other things there were the dark-blue poncho, with a grey lining, and a round hat covered with oiled silk; also the basket-hilted sabre, the firearms with the cartridges, and a genuine *lumbilho*.

The revolts still rife in the provinces, as I have said, had completely emptied the metropolis of troops of the line; and the horse-artillery were likewise called away, so that I could form but an imperfect idea from observation either of the Brazilian army or of the artillery. The few guns remaining in the Arsenal of Rio were constructed quite on the English system, the adoption of which by an army like that of Brazil, where the troops are subject to such frequent sea-transport both in peace and war, certainly appears to be very convenient.

The army is not above 23,000 men strong, and seems to be somewhat disproportioned to the immense area of the

country; but we must not here apply the same standard as to European armies, which are chiefly engaged in warfare on a grand scale. In Brazil the system of war is more confined to partial enterprize, as we have seen in the history of this country. There are consequently three principal objects for the service of the Brazilian army, which absolutely requires the strength and organization sufficient to effect these,—to preserve peace and security in the interior, to watch the accessible points of the land-frontier, and to co-operate in the defence of the extensive line of coast.

Brazil comprises three very different kinds of territory,—impenetrable forests, mountain-ranges, and large plains or Campos,—upon which the troops have to act, in maintaining peace in the interior, suppressing revolts in the provinces, and defending the frontier against an enemy. The accessible points are not numerous, and, on account of their remoteness from all civilization, possess little military interest. The only frontiers on which a serious war has been waged are, as we have seen in the history, those of Buenos Ayres and Montevideo, where noble Campos, peculiarly adapted for the use of all three weapons, present a favourable field for warfare.

The Brazilian force in active service here, at the time when it was under the command of General Braun, (now resident in Dresden,) amounted to between 7000 and 8000 infantry, and 5000 cavalry, with three batteries of four guns,—one five-inch howitzer and three nine-pounders; the fine German Legion, which has since

been disbanded, belonged to this force. There was one strange circumstance connected with the cavalry here,—that three to five horses were assigned to each man. On the march each cavalry regiment was followed, at a distance of about a thousand paces on the side turned from the enemy, by a Trupilho (a troop), consisting of the second horses of all the men, and driven by some cavalry and a small number of Indian men or women. A second, but larger troop, consisting of the third and fourth horses for each man of the regiment, followed the baggage, together with the droves of cattle. When the second Trupilhos of several regiments fell in with the baggage, a commingling was always most carefully avoided. A third troop, of one or two more reserve horses for each soldier, formed a kind of "flying horse-depôt," which seldom approached the army within twenty leagues, and was generally left much further behind.

During the march the cavalry regiments were accustomed to change horses daily, and they never neglected to do this when on the eve of battle. "It was as difficult to wean them from this custom," said General Braun to me, "as to overcome their predilection for the carbine." These large troops of horses and cattle obliged the Brazilian General, as well as the enemy, always to bivouac on the banks of rivers, where alone could be found sufficient fodder for the animals, of which there was frequently a deficiency in the plains. The movements therefore of the troops on both sides were often directed merely to obtaining possession of a parti-

cular valley, or the dispersion of the enemy's troops of horses, whilst these wide tracts of country enabled them easily to evade any decisive engagement.

In other parts of the empire likewise, where revolts had to be suppressed and internal war raged, the same system, of postponing as long as possible any decisive movement, seems to have prevailed both with friend and foe, or these disturbances must have been sooner quelled. The interminable Campos in the south, in the Banda Oriental and Rio Grande, and in other provinces the endless virgin forest or impassable mountain districts, may have equally impeded military operations, in addition to the enervating effects of the tropical heat, both mental and physical, upon officers and men. In the last-mentioned description of country the light infantry constitutes the principal force, formed into small moveable columns, which are alone here able to advance; the cavalry is impeded by the narrow footpaths, and the artillery, with the exception of a few light howitzers packed on mules, has to be left behind or its place supplied by rockets.

As it is seldom that many thousand men are concentrated upon any spot, the division of the infantry into independent battalions, light-armed, with light baggage and a dress suitable to the climate, seems best adapted for the service required, and for overcoming the natural obstacles of the country.

The old military principle, of keeping the forces as much as possible together, and bringing them to bear upon decisive points, may be recommended to no army

more properly than to that of Brazil, from its deficiency in numerical strength; and this is especially the case when it is called upon to defend the immense extent of coast. To effect this, the land and naval forces whenever practicable must co-operate, and restrict their efforts to holding a few commanding points. In this case the skill of the military engineer is required to fortify and strengthen these points as much as possible, by taking every advantage of the soil and the configuration of the coast, as soon as he has clearly ascertained in what direction and in what force an enemy's fleet is able to approach for the purpose of bombarding the fortress or landing troops, and what points of attack the land-side offers to the latter. Such places, amongst which we reckon for instance Bahia and Rio de Janeiro, require a large number of artillerymen to man their extensive works; and we therefore see sufficient reason for the four battalions of foot-artillery in the Brazilian army, which at first sight seem to be disproportioned to the rest of the troops. Preparations must also be made to facilitate, in case of necessity, the concentration on these points of a considerable body of the National Guards, since the troops of the line stationed in the vicinity will seldom suffice, and since less practised troops, when supported by a strong and efficient artillery, would oppose a powerful resistance to any attempts to land. Almost every landing has its weak moment at the beginning, and only acquires strength by degrees; if therefore the enemy is attacked at the right time and with a superior force, it will be easy to stop the attempt at the outset.

The Imperial Army, according to the "Relatorio da Repartição dos Negocios da Guerra," of the year 1845, was at that period composed of the following troops:—

TROOPS OF THE LINE.

19 Generals.—177 General Staff-officers.

	Men.	
Infantry.		
8 Battalions of Fusileers	4918	
8 Battalions of Chasseurs	4418	
Detached corps of these	883	
9 Depôt-Companies	1102	
10 Provisional (including 6 Chasseur) Companies	1015	
4 Corpos Fixos	1450	
1 Corpo de Deposito in Rio Grande do Sul	365	
1 Depôt of Recruits in Pernambuco	34	
1 Contingent das Alagóas in Ceará	200	
1 Corps of German Volunteers in Rio Grande do Sul	90	
		14,475
Cavalry.		
3 Light Regiments	673	
3 Companies of Cavallaria Fixa	210	
		883
Artillery.		
4 Battalions of Infantry	1576	
1 Corps of Cavalry	403	
Several Companies of Artillerymen	279	
		2,258
Pioneers.		60
Total of Troops of the Line (including 159 Staff and 1018 Subaltern Officers)		17,676
Also, a National Guard Mobile		4,405
5 Companies of Pedestres against the wild Indians in Maranhão, Goyaz and Minas Geraes		440
Invalids in Santa Catharina		146
Total amount of the Army, including Officers		22,863

The National Guard has been completely organized in only ten Provinces of the empire; its strength is as follows:—

	Men.
In the Province of Pará	13,827
„ „ Maranhão	10,324
„ „ Piauhy	3,824
„ „ Rio Grande do Norte	9,973
„ „ Parahyba	13,255
„ „ Pernambuco	25,782
„ „ Bahia	18,259
„ „ Rio de Janeiro* (exclusive of the Metropolis)	24,300
„ Metropolis	6,579
„ Province of S. Paulo	23,933
„ „ Santa Catharina	6,282
	156,338

The entire force of the National Guard which may be raised in the other eight provinces—Mato Grosso, Goyaz, Ceará, Rio Grande do Sul (which during the last revolt furnished 4000 men, including about 3000 horse), Espirito Santo, Sergipe, Alagóas and Minas Geraes—may probably amount to not less than 55,000 to 60,000 men; so that the strength of the whole National Guard, when the complete organization is effected, will amount to between 215,000 and 220,000 men. Besides this, the Metropolis, Bahia and Pernambuco have also considerable bodies of Municipal-Police,—Rio de Janeiro about 900 men, Bahia 600, and Pernambuco about as many, all well disciplined and maintained.

* The organization in this province is not yet completely finished, but it can be readily seen that the above statement will be within the mark.

September 24th.—This morning I attended, in full General's uniform, the funeral service for Dom Pedro the First in the church of Nossa Senhora da Gloria, which took place in the presence of the Emperor and the Court. I arrived early, and had time to enjoy in this beautiful weather the splendid view of Rio and the Bay. After the ceremony I drove into the city, and went on board the Prussian barque 'Charlotte,' Captain Reintrok, a pretty vessel, in good trim, with spacious cabins; she had (a thing I had never before seen) no bitts, and was provided with a simple stopper worked by means of a hook. The crew consisted of sixteen men, who unhappily were destined never to reach their homes: the barque sailed from Rio, and no tidings were ever heard of her again. In this vessel was lost, to my great regret, the arms and accoutrements which the Emperor had graciously presented to me. Not long after the loss of this barque, the Prussian Chaplain to the Embassy, Neumann, whose acquaintance I made in Rio, also perished by shipwreck: he had crossed the ocean in safety, and met with this lamentable end at the mouth of the Elbe, in sight of his native land!

From the 'Charlotte' I passed over to his Majesty's merchant brig 'Der Kronprinz,' Captain Sievert, at whose topmast waved the Prussian pendant, which merchantmen are only allowed to hoist *south* of the Line*.

* His Majesty's corvette the 'Amazone', as is well known, hoisted the Prussian pendant two years later, for the first time after more than a century, in the waters of the *northern* hemisphere out of the Baltic Sea.

Both the brig and the barque were well-rigged, with everything in perfect seamanlike order; the cabin of the 'Kronprinz' was also very spacious. The same remark applies to a fine ship the 'Johns' of Hamburg, which I visited last; her cabin was fitted up quite luxuriously. The German ships all hoisted their flags when they heard of my presence in the roadstead,—a voluntary tribute of interest and sympathy; but the further from home, the more do Germans cling together.

September 26th.—As early as half-past nine o'clock I galloped off in the direction of the city, following, wherever possible, the shore of the Bay. On my road I got into a number of by-ways and streets, which had little the appearance of belonging to a metropolis. Upon a rising ground, near the small bay called the "Bahia de Inhaúme," stands a large white building, the hospital dos Lazaros. Several palm-islands greatly enhance the beauty of this bay, which looked quite a paradise in such heavenly weather. I had wished to extend my ride today some leagues northward along the west shore of the bay, but to my regret the road I took was soon obstructed by various impediments, not often encountered in Brazil, such as hedges and fences; I therefore turned off to S. Christovão, and following thence the road to Minas and Santa Cruz came to Venda Grande. Before the point at which the road branches off to Minas I turned sharp to the right, and then proceeding parallel to the shore of the Bay, which receded from my sight, I rode on through low capueira, interspersed with the stems of tall cactuses.

Shortly before reaching the bare rock of the Penha, upon which stands the little church, the capueira became taller and more fragrant; splendid forest-trees rose here and there like giants out of the underwood, with a dark and solemn air, and the hills extended behind the Penha before me on the right. For some distance the wood approached nearer to the road, converting it into a shady avenue, and then by degrees the country became again more open and hilly. I stopped at a brook near some fazendas, and met a cattle-dealer, with high, black, shining boots, who told me, in good French, that I was on the road to Porto da Estrella, and pointed out the direction. In half an hour I passed a second brook and some detached houses; and presently a negro, who was journeying the same way, joined me, and we jogged on for some distance together. The sun's heat was oppressive; my horse was tired, and I was hungry,—I longed for a venda. My black companion, who could not very well understand what I said, soon disappeared, and my charger refused service, so that I was obliged to dismount and lead him along. After wandering about for some hours, I came upon a straight, interminable path cut through the capueira, leading up to some detached houses surrounding a square, on one side of which stood a church. I believe the name of this place was Nossa Senhora da Irajá. A young Parisian showed me the inn, where I refreshed myself with bread and oranges, and then proceeded in the direction of the road to Minas, which soon led me to Venda Grande. The country through which I

passed today was hilly and covered with capueira, but I noticed more palms than on the road to Santa Cruz. The cattle-dealer had told me that a large body of troops were escorting a number of prisoners on this road from Minas to Rio, but I saw no trace of them.

It was past four o'clock when I again reached Venda Grande, where I turned in to rest for awhile. Having ordered coffee, in a few words of broken Portuguese, I was going to look after my horse, when in crossing the yard I heard the landlady rating her daughter soundly in good German. My pleasurable surprize may be readily imagined; and the good woman, in an instant forgetting her wrath, was very anxious in her attention to my comfort and accommodation; she was a native of Baden, and had been settled here for some time.

Soon after I passed San Christovão it grew dark: in the city I met the Emperor, on his way from the Botanic Garden, and it was seven o'clock when I reached home. I went to bed early, in order to enjoy a good night's rest after my ride, for at daybreak the next day we were to set out upon a longer excursion through the Province of Rio de Janeiro.

END OF VOLUME I.

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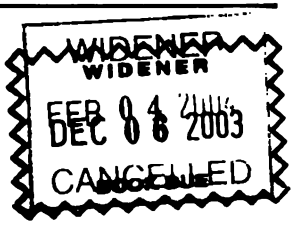

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